SigmaSystemCenter 3.0

Data Reference Guide

- Second Edition -

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Preface

How to Use This Manual

SigmaSystemCenter Data Reference Guide is intended for administrators of SigmaSystemCenter and explains its information of maintenance. This manual is a supplement to *SigmaSystemCenter Configuration Guide*.

Manual Organization

Part I Maintenance Information

1 "Error Events and Policy Actions": Describes the list of error events that SigmaSystemCenter can detect, the list of actions of policies, and the default disposals.
2 "Logs": Explains the Event logs that are displayed by SigmaSystemCenter.

Appendices

Appendix A "Network Ports and Protocols"
Appendix B "Transferring the Configuration Database"
Appendix C "How to Estimate Database Usage"
Appendix D "Types of Action Sequence"
Appendix E "Revision History"
Appendix F "License Information"

SigmaSystemCenter Manuals

The manuals of SigmaSystemCenter are configured for the various products and components as follows.
In this manual, each of the following manuals is described as "How Manuals Are Called in This Manual."

Products or Components	Manuals	How Manuals Are Called in This Manual
SigmaSystemCenter 3.0	SigmaSystemCenter 3.0 First Step Guide	SigmaSystemCenter First Step Guide
	SigmaSystemCenter 3.0 Installation Guide	SigmaSystemCenter Installation Guide
	SigmaSystemCenter 3.0 Configuration Guide	SigmaSystemCenter Configuration Guide
	SigmaSystemCenter 3.0 Reference Guide	SigmaSystemCenter Reference Guide
NEC ESMPRO Manager 5.43	NEC ESMPRO Manager Ver.5.4 Installation Guide	NEC ESMPRO Manager Installation Guide
DeploymentManager 6.0	DeploymentManager Ver6.0 First Step Guide	DeploymentManager First Step Guide
	DeploymentManager Ver6.0 Installation Guide	DeploymentManager Installation Guide
	DeploymentManager Ver6.0 Operation Guide	DeploymentManager Operation Guide
	DeploymentManager Ver6.0 Reference Guide	DeploymentManager Reference Guide
System Monitor - Performance Monitoring Services 5.0	System Monitor - Performance Monitoring Services User's Guide	System Monitor - Performance Monitoring Services User's Guide
	SigmaSystemCenter SSC Command Reference	SSC Command Reference

Reference: All the latest SigmaSystemCenter manuals are available in the following URL.

http://www.nec.com/sigmasystemcenter/en/support/index.html

The information regarding product summary, installation, configuration, operation and maintenance of SigmaSystemCenter are included in the following four manuals. The purposes of the manuals are as follows.

SigmaSystemCenter First Step Guide
This manual is intended for users who use SigmaSystemCenter for the first time and explains the product summary, system design methods and operating environment.

SigmaSystemCenter Installation Guide
This manual is intended for system administrators who install, upgrade, or uninstall SigmaSystemCenter and explains how to.

SigmaSystemCenter Configuration Guide
This manual is intended for system administrators who configure the whole system after installation and who operate and maintain the system after the configuration. Actual operational flow is used to explain the process from the configuration after installation to the operating procedures. This manual also explains the maintenance process.

SigmaSystemCenter Reference Guide
This manual is intended for administrators of SigmaSystemCenter and explains its functions, the operational methods, information of maintenance and trouble shooting, and lists all the operating screens. This manual is a supplement to *SigmaSystemCenter Installation Guide* and *SigmaSystemCenter Configuration Guide*.

Document Conventions

In this manual, information that needs attention and references are described as follows:

Note: indicates caution notes, and supplementary explanation for functions, operations, and settings.

Reference: indicates why and where you should refer to.

In addition, this manual uses the following document conventions.

Convention	Used Item	Example
Bold font	Items that a user selects on a screen, short text input, screen names, short command-line commands, and command-line options	Type **Exit** and click **Enter**. **User License Confirmation** screen Use the **–prt** command. Use the ***/a*** option.
Italic font	Book or manual titles, and variable names	*Configuration Guide* `add` *`GroupName`*
Quotation marks	Chapter titles and default values	See Chapter 9, "Add a Computer."
Monospace font (`courier new`)	Long text inputs, messages and command-line commands	Type the following text: `Confidential-Class B`

Part I Maintenance Information

This part describes the maintenance of SigmaSystemCenter.

This part contains the following chapters:

- 1 Error Events and Policy Actions 11
- 2 Logs 119

1. Error Events and Policy Actions

This chapter explains the errors that SigmaSystemCenter can detect and the details of policy actions to which corresponding event handler settings to the assumable errors can be configured.

This chapter contains the following sections:

- 1.1 Event Monitoring and Policy 12
- 1.2 Events SigmaSystemCenter Can Detect 13
- 1.3 Policy Setting 57
- 1.4 Configuring Actions 58
- 1.5 About Diagnosis 64
- 1.6 About Standard Policy 77
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1.1. Event Monitoring and Policy

SigmaSystemCenter can monitor events and performance of managed machines. It can also change configuration of machines to restore from an event or error and notify a user that an event or error occurred.

SigmaSystemCenter works with multiple compatible products and components, such as NEC ESMPRO Manager, NEC ESMPRO Agent, VMware vCenter Server, and System Monitor - Performance Monitoring Services for monitoring the running status, events, and performance of managed machines. If a compatible product or component detects a status change of a managed machine, it notifies the event to the policy control processing of SigmaSystemCenter.

The policy control processing of SigmaSystemCenter outputs the event information to Operation Logs, and then, executes the processing to cope with the event according to policy setting.

You can set actions to execute against each event, order to process events, and execution conditions for policy setting. In addition, you can assign policy setting to each operation group and model.

1.2. Events SigmaSystemCenter Can Detect

Monitoring products and components that SigmaSystemCenter can work with and what they monitor are as follows:

Note: A registry path of Windows OS is different according to whether it is x86 OS or x64 OS. The registry path in this section is indicated in the x86 OS format. If you are using x64 OS, substitute "HKEY_LOCAL_MACHINE\SOFTWARE\Wow6432Node" for "HKEY_LOCAL_MACHINE\SOFTWARE."

- NEC ESMPRO Manager and NEC ESMPRO Agent

  NEC ESMPRO Manager requests NEC ESMPRO Agent on a managed machine to acquire information by SNMP periodically and if NEC ESMPRO Manager cannot acquire the information, NEC ESMPRO Manager regards that the managed machine is down and notifies *Machine inaccessible error* event to the policy control processing of SigmaSystemCenter. NEC ESMPRO Manager also can monitor the threshold of statistical information of each resource and notify events.

  NEC ESMPRO Agent always monitor each resource status of a managed machine. If NEC ESMPRO Agent detects a failure of a resource, it notifies NEC ESMPRO Manager of the failure. NEC ESMPRO Manager notifies the policy control processing of SigmaSystemCenter of the failure.

  For ESX, if the monitoring module of the HDD access impossible is installed with NEC ESMPRO Agent on a machine, NEC ESMPRO Agent can detect the "No response from the server" even when a HDD cannot be accessed.

  Reference: For the details of or how to obtain the HDD Access Monitoring Module, contact our sales representative.

- SystemProvisioning

  SystemProvisioning executes the following periodical monitoring as alive monitoring for managed machines:

  - Examining the communication with Ping (Ping monitoring)
  - Connecting to the specified TCP port (Port monitoring)

  Furthermore, SystemProvisioning can monitor managed machines whether they function as virtual machine servers or not. It is called virtual machine server monitoring and is available for Xen, Hyper-V, and KVM.

- System Monitor - Performance Monitoring Services

  System Monitor - Performance Monitoring Services notifies the policy control processing of SigmaSystemCenter when statistics on CPU load factor of a managed machine, a status of utilization, such as disk utilization, or statistics information of multiple machines in a group exceeds the threshold value.

  In addition, System Monitor - Performance Monitoring Services executes high or low load alert monitoring of virtual machine servers that triggers the actions of the VM Optimized Placement.

- Monitoring through VMware vCenter Server

  SigmaSystemCenter executes the following monitoring through vCenter Server.

  - Connection check of a virtual machine server (VMware)
  - CPU usage rate of a virtual machine server (VMware)
  - Memory usage rate of a virtual machine server (VMware)
  - Heartbeat status of a virtual machine (VMware)
  - CPU usage rate of a virtual machine (VMware)
  - Memory usage rate of a virtual machine (VMware)
  - Power status of a virtual machine (VMware)
  - Datastore usage rate
  - Allocation rate of disk on a datastore
  - Status of a datastore connection
  - Status of a network connection

  When a failure occurs, an alert is generated in vCenter Server. If an alert related to the above is generated, SigmaSystemCenter notifies it of its policy control processing.

- Monitoring VMware ESXi

  If a managed machine is VMware ESXi, SigmaSystemCenter monitors the machine directly by connecting remotely to monitor its running status.
  To monitor the existence of a machine, SigmaSystemCenter checks the connection from a management server to VMware ESXi. If the connection is disconnected, the component notifies the policy control processing of SigmaSystemCenter of *Machine inaccessible error* event and if the connection recovers, SigmaSystemCenter notifies its policy control processing of a *Machine inaccessible error recovery* event. In addition, SigmaSystemCenter checks the disk access status periodically and if the check fails, SigmaSystemCenter notifies its policy control processing of a *Hard disk failure* event.

- Optimized Placement function

  Optimized Placement provides the load balancing function. When the load balancing function determines that high load status cannot be resolved even if all virtual machine servers in a group are used, it notifies the policy control processing of SigmaSystemCenter of *Scaleout Recommendation* event.

- Optimal Placement monitors the value of "Consumed" and "Actually Consumed" in resource pools, and, when it excesses or goes down its thresholds, this function reports the events of resource pool consumption to SigmaSystemCenter policy control.

- Out-of-Band Management

  Out-of-Band Management receives PET directly from BMC of managed machines and manages them to detect abnormality and failure in the hardware. Out-of-Band Management can detect an event corresponds to the hardware failure event that is detected by NEC ESMPRO Manager and NEC ESMPRO Agent. A difference is Out-of-Band Management does not use services on OS. Therefore, Out-of-Band Management can detect hardware failure events even when OS cannot be accessed.

  Out-of-Band Management monitors voltages and temperatures of chassis, and predicts that hardware will be in critical failure status to notify the policy control processing of SigmaSystemCenter of HW Predictive events

  Note: A managed machine where NEC ESMPRO Agent is installed does not send PET but sends NEC ESMPRO Agent's reports. However, both NEC ESMPRO Agent's reports and PET might be sent depending on the timing of hardware failures. Even if this is the case, Out-of-Band Management events will not occur on the machine managed by NEC ESMPRO Agent.

- Monitoring through Microsoft Failover Cluster

  If a node of a Hyper-V virtual machine server or a Hyper-V virtual machine managed by Microsoft Failover Cluster and SigmaSystemCenter, SigmaSystemCenter obtains events from Microsoft Failover Cluster and notifies the policy control processing of SigmaSystemCenter of the events.

  To make SigmaSystemCenter work with the Microsoft Failover Cluster as the above mentioned, add the Hyper-V cluster as a subsystem.

  Microsoft Failover Cluster is a high-available system, so the virtual machines running on it are also high-available. For example, when a virtual machine fails, Microsoft Failover Cluster failovers the virtual machine to another node. SigmaSystemCenter obtains Microsoft Failover Cluster events such as node down or virtual machine failure, updates the database, and notifies system administrators of the events.

Following subsections explains the events that these products or components can detect and the checking procedure of detected events.

1.2.1. Events NEC ESMPRO Manager Can Detect

The following table shows the error events that NEC ESMPRO Manager can detect.

You can check the following error events by specifying "SystemMonitorEvent" in the Report Source box on the Corresponding Event Handler Settings window, and a value that the *Source Name* in the following table and the event ID are combined, for example, ESMFSSERVICE[0XC00403E8], is displayed in the Event box on the window.

Event Category	**Events NEC ESMPRO Manager Can Detect**		
	Source Name	**Event ID**	**Description**
Hard disk recovery failure	ESMDISKARRAY	0X800403E9	Disk Array Logical Device Critical
	ASMBENOTIFY	0X0000200C	Member is down on array
	ASMBENOTIFY	0X0000200D	Member is missing on array
	ASMBENOTIFY	0X0000200E	Array is off-line; member failed
	ASMBENOTIFY	0X00002023	Array is critical
	ASMBENOTIFY	0X0000205C	Array is still critical
	ASMBENOTIFY	0X0000B00E	Device is failed
	ASMBENOTIFY	0X0000B033	Array is degraded
	ASMBENOTIFY	0X0000B034	Second-level array is degraded
	ASMBENOTIFY	0X0000B036	Array is degraded
	ASMBENOTIFY	0X0000B037	Second-level array is degraded
Hard disk replacement failure	ESMDISKARRAY	0XC00403F3	Disk Array Physical Device Dead
	ESMDISKARRAY	0XC00403F7	Disk Array Physical Device Dead
	ESMDISKARRAY	0X800403FC	Disk Array Physical Device S.M.A.R.T. Error
	ESMSTORAGESERVICE	0X800403E8	Hard Disk Failure Prediction:Exceed Threshold
	ESMSTORAGESERVICE	0X800403E9	Hard Disk Failure Prediction:S.M.A.R.T. Error
	ASMBENOTIFY	0X00002014	Reconstruct aborted due to I/O error
	ASMBENOTIFY	0X00002017	Verify aborted due to I/O error, no miscompares
	ASMBENOTIFY	0X00002019	Initialize aborted due to I/O error
	ASMBENOTIFY	0X0000202D	Reconstruct failed to start due to I/O error
	ASMBENOTIFY	0X00002035	Update of array drives failed after Initialize
	ASMBENOTIFY	0X00002038	Scheduled Reconstruct failed to start
	ASMBENOTIFY	0X00002039	Scheduled Verify failed to start
	ASMBENOTIFY	0X0000204E	Verify utility failed to start
	ASMBENOTIFY	0X00002059	Dedicated spare not functional

Event Category	Events NEC ESMPRO Manager Can Detect		
	Source Name	**Event ID**	**Description**
	ASMBENOTIFY	0X00002085	Verify aborted due to I/O error with fixed miscompares
	ASMBENOTIFY	0X00002090	Recovered error: SMART event received for array
	ASMBENOTIFY	0X00002091	Recovered error: SMART event received for device
	ASMBENOTIFY	0X00002094	I/O error aborted Verify, unfixed miscompares
	ASMBENOTIFY	0X000020AD	Device is down. A Hard Drive is down or no longer responding.
	ASMBENOTIFY	0X0000B069	Array is dead
	ASMBENOTIFY	0X0000B090	Non-corrected ECC error found
	ASMBENOTIFY	0X0000B11E	Channel offline
	ASMBENOTIFY	0X0000B11F	Channel offline
	ASMBENOTIFY	0X0000B121	Channel offline
	ASMBENOTIFY	0X0000B122	Channel offline
	ASMBENOTIFY	0X0000B123	Channel offline
Hard disk failure	ESMDISKARRAY	0XC00403EA	Disk Array Logical Device Offline
	ESMDISKARRAY	0XC00403EC	Disk Array Logical Device Offline
	ESMDISKARRAY	0X80040407	Disk Array Option report Warning
	ESMDISKARRAY	0XC0040408	Disk Array Option report Fatal
	ASMBENOTIFY	0X0000200F	Array is off-line
	ASMBENOTIFY	0X0000B057	Array is dead
	ASMBENOTIFY	0X0000B058	Second-level array is dead
	ASMBENOTIFY	0X0000B05A	Array is dead
	ASMBENOTIFY	0X0000B05B	Second-level array is dead
	ASMBENOTIFY	0X0000B06A	Second-level array is dead
CPU load failure	ESMCPUPERF	0XC0000064	CPU Load Error
	ESMCPUPERF	0XC0000068	CPU Load Error
	ESMCPUPERF	0X80000066	CPU Load Warning
	ESMCPUPERF	0X8000006A	CPU Load Warning
CPU degeneracy failure	ESMCOMMONSERVICE	0X800002BD	CPU Reduce
	ESMCOMMONSERVICE	0X800002BF	CPU Reduce
	ESMCOMMONSERVICE	0XC0000838	CPU Module FRB
CPU failure	ESMCOMMONSERVICE	0XC0000451	CPU Internal error
	ESMCOMMONSERVICE	0XC0000454	CPU thermal trip event
	ESMCOMMONSERVICE	0XC0000523	Processor Disabled
	ESMCOMMONSERVICE	0xC0000947	Processor Error
	ESMCOMMONSERVICE	0XC0000B04	CPU Self-Test Error
	ESMCOMMONSERVICE	0XC0000B07	CPU Initialize Error

Event Category	Events NEC ESMPRO Manager Can Detect		
	Source Name	**Event ID**	**Description**
CPU temperature failure	ESMCOMMONSERVICE	0XC0000454	CPU thermal trip event
Memory degeneration failure	ESMCOMMONSERVICE	0X800002BE	Memory Reduce
	ESMCOMMONSERVICE	0X800002C6	Memory Reduce
	ESMCOMMONSERVICE	0X80000515	POST memory resize
	ESMCOMMONSERVICE	0X8000051A	POST cache Reduce
	ESMCOMMONSERVICE	0XC000051C	Cache ECC multi
Memory failure	ESMCOMMONSERVICE	0XC000044C	ECC Multiple Error
	ESMCOMMONSERVICE	0XC00008FC	ECC Uncorrectable Error
	ESMCOMMONSERVICE	0XC0000903	ECC Uncorrectable Error
	ESMCOMMONSERVICE	0xC0000959	Memory Error
	ESMCOMMONSERVICE	0XC0000B18	Memory Parity Error
	ESMCOMMONSERVICE	0xC0000B24	Memory Temperature Error
Memory degeneration failure	ESMCOMMONSERVICE	0X80000BC2	Memory Utilization Warning
	ESMCOMMONSERVICE	0XC0000BC0	Memory Utilization Error
Machine inaccessible error	ESMDSVNT	0XC0000002	No response from the server
Prediction: chassis temperature failure	ESMCOMMONSERVICE	0XC0000066	Temp Lower Error
	ESMCOMMONSERVICE	0XC0000070	Temp Lower Limit Error
	ESMCOMMONSERVICE	0XC0000064	Temp Upper Error
	ESMCOMMONSERVICE	0XC0000072	Temp Upper Limit Error
	ESMCOMMONSERVICE	0XC000093E	Temperature Error
Prediction: power unit failure	ESMCOMMONSERVICE	0XC0000915	Power Unit Reduction
Prediction: voltage failure	ESMCOMMONSERVICE	0XC00001FD	Voltage Lower Limit Error
	ESMCOMMONSERVICE	0XC00001FF	Voltage Lower Limit Error
	ESMCOMMONSERVICE	0XC0000203	Voltage Upper Limit Error
	ESMCOMMONSERVICE	0XC0000205	Voltage Upper Limit Error
	ESMCOMMONSERVICE	0XC0000932	Voltage Error
Prediction: fan/cooling device failure	ESMCOMMONSERVICE	0XC00000C8	Fan Unit Error
	ESMCOMMONSERVICE	0XC00000D0	Fan Lower Limit Error
	ESMCOMMONSERVICE	0XC00000D2	Fan Lower Limit Error
	ESMCOMMONSERVICE	0XC00000D6	Fan Upper Limit Error
	ESMCOMMONSERVICE	0XC00000D8	Fan Upper Limit Error
	ESMCOMMONSERVICE	0XC0000A8C	Liquid Leak Error
Recovery from the hard disk recovery failure	ESMDSIKARRAY	0X400403E8	Disk Array Logical Device Online
	ESMDSIKARRAY	0X400403EB	Disk Array Logical Device Consistency Check
	ESMDSIKARRAY	0X400403F2	Disk Array Physical Device Online

Event Category	Events NEC ESMPRO Manager Can Detect		
	Source Name	**Event ID**	**Description**
	ESMDSIKARRAY	0X400403F4	Disk Array Physical Device Rebuild
	ESMDSIKARRAY	0X400403F5	Disk Array Physical Device Hot Spare
	ESMDSIKARRAY	0X400403F6	Disk Array Physical Device Ready
	ESMDSIKARRAY	0X40040406	Disk Array Option report Normal
	ASMBENOTIFY	0X00002013	Reconstruct completed
	ASMBENOTIFY	0X0000B02D	Array is optimal
CPU load failure recovery	ESMCPUPERF	0X40000067	CPU Warning Recovered
	ESMCPUPERF	0X4000006B	CPU Warning Recovered
	ESMCPUPERF	0X80000065	CPU Error Recovered
	ESMCPUPERF	0X80000069	CPU Error Recovered
CPU temperature failure recovery	ESMCOMMONSERVICE	0X40000949	CPU thermal trip Recovered
Memory degeneration failure recovery	ESMCOMMONSERVICE	0X80000BC1	Memory Utilization Error Recovered
	ESMCOMMONSERVICE	0X40000BC3	Memory Utilization Warning Recovered
Machine inaccessible error recovery	ESMDSVNT	0X40000001	The server access recovered
Clear Alert: chassis temperature failure recovery	ESMCOMMONSERVICE	0X8000006B	Temp Lower Error Recovered
	ESMCOMMONSERVICE	0X8000006A	Temp Upper Error Recovered
Clear Alert: voltage failure recovery	ESMCOMMONSERVICE	0X800001FE	Voltage Lower Limit Error Recovered
	ESMCOMMONSERVICE	0X80000204	Voltage Upper Limit Error Recovered
	ESMCOMMONSERVICE	0X40000BAD	Voltage Recovery
Clear Alert: fan/cooling device failure recovery	ESMCOMMONSERVICE	0X800000D1	Fan Lower Limit Error Recovered
	ESMCOMMONSERVICE	0X800000D7	Fan Upper Limit Error Recovered
	ESMCOMMONSERVICE	0X400002C3	Cooler Reduced
	ESMCOMMONSERVICE	0X400000CD	Fan Unit Error Recovered
Cluster: Node down	CLUSTERPRO	0XC00008A4	Server down
	CLUSTERPRO X	0X40000002	Server down
	EXPRESSCLUSTER X	0X40000002	Server down
Cluster: Network failure	CLUSTERPRO	0XC0005217	Public LAN error
		0XC000521B	Public LAN error
		0XC000521C	Public LAN error
		0XC000521D	Public LAN error
File system free capacity failure	ESMFSSERVICE	0XC00403E8	File system free capacity:Fatal
	ESMFSSERVICE	0X800403E9	File system free capacity:Warning
Recover from File system free capacity failure	ESMFSSERVICE	0X400403EA	File system free capacity:Normal

1.2.2. Checking Events that Can Be Detected Through NEC ESMPRO Manager

You can refer to events that can be detected through NEC ESMPRO Manager by using the "Save Monitor Event". Perform the following procedure to see the events by reference.

Note: The following procedure is for Windows.

A document that shows events that can be detected through NEC ESMPRO Agent for Linux is provided individually, so contact our sales representative.

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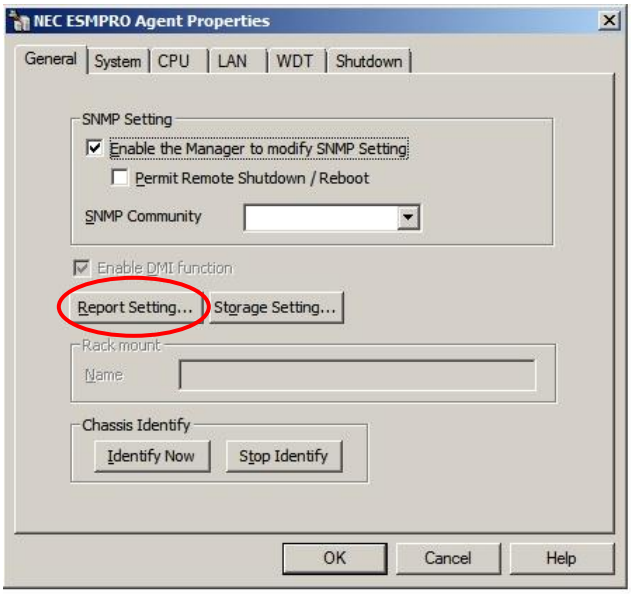
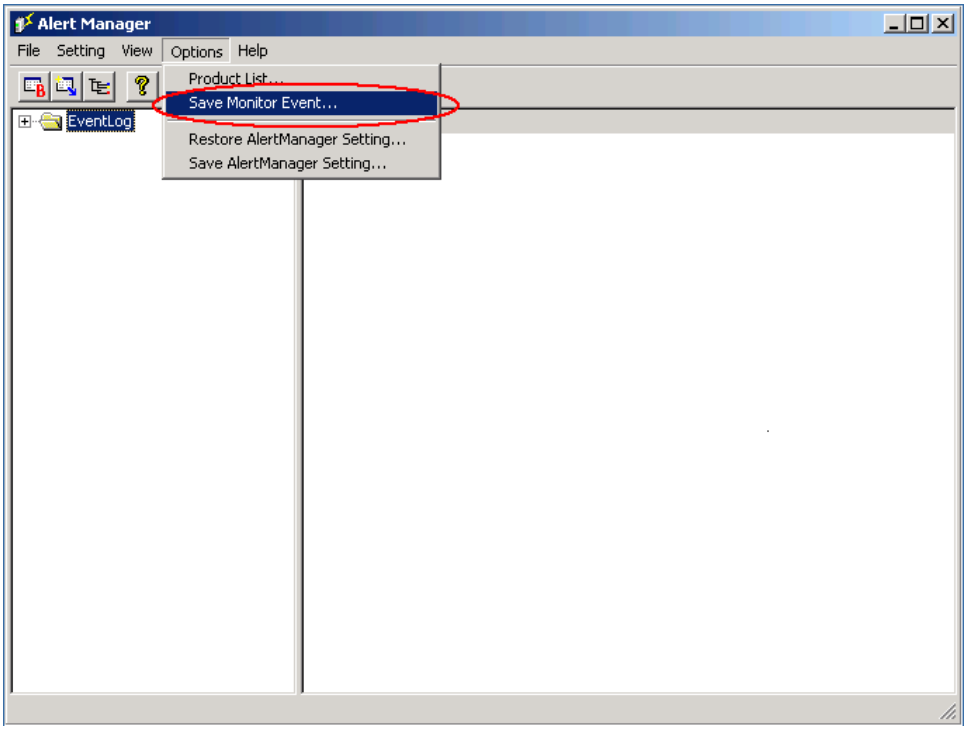
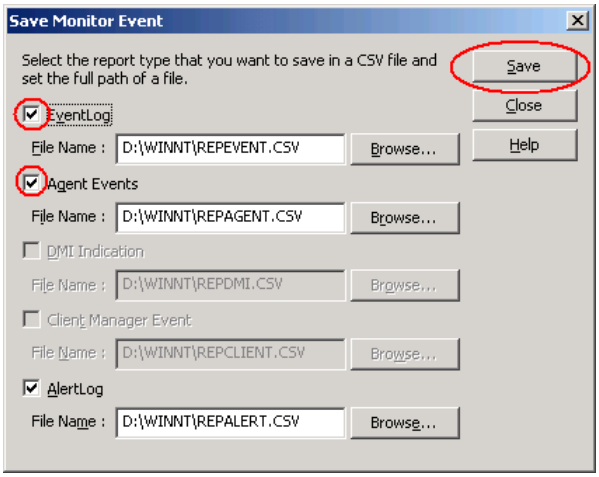
1. Start NEC ESMPRO Agent from Control Panel on the machine on which NEC ESMPRO Agent installed.
2. Click **Report Setting** on the **General** tab to start the Alert Manager setting tool.



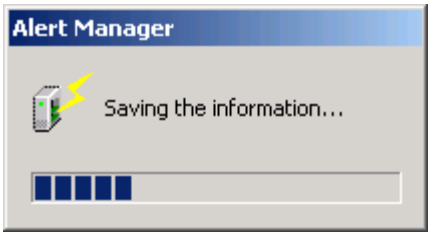
3. Select **Save Monitor Event** from the **Options** menu on the Alert Manager setting tool.



4. The dialog box appears. Select the **EventLog** check box and **Agent Events** check box, and then click **Save**.



5. The system starts writing the monitoring target to a file. The following dialog box is displayed during writing.



6. When the writing process finishes, the dialog box disappears.

Writing the monitoring target is now complete.

The first line is a header and from the second line, the written file is created in the CSV format. See the event which "Manager" field is **YES**.

Note: The events that SigmaSystemCenter can detect through NEC ESMPRO Manager are only default events monitored by NEC ESMPRO Agent. If you changed the monitoring target, you may not be able to check the event properly.

1.2.3. Events SystemProvisioning Can Detect

The following table shows the error events that SystemProvisioning can detect.

The following failure events can be checked by selecting "AliveMonitor" in the Report Source list in the Corresponding Event Handler Settings window of Policy Setting.

Event Category	Event ID	Event Name	Description
Machine inaccessible error	[PeriodicalAliveMonitor] TargetDown	No response from the machine.	SystemProvisioning could not receive a Ping Reply or could not connect with a specified port. If the target is virtual machine server, it is not functioning as a virtual machine server.

- To set over 250 units of machines as the Port monitoring target, change both the values of Maximum number of parallel processings and Maximum time of one time monitoring according to the formula below:

Formula: (the number of Port monitoring target machine units) * 20 [sec] / (the value of Maximum number of parallel processings) < (the value of Maximum time of one time monitoring)

- If the value of the Maximum number of parallel processings is increased, time to monitor machines at one time becomes short but loads of the management server increase. If the value of the Maximum time of one time monitoring is increased, loads of the management server decrease but time to monitor machines at one time becomes long.

Note: Depending on the number of SystemProvisioning's alive monitoring target machines and the power status of the machines, the monitoring time can be much longer. If the monitoring of all the target machines takes longer than the specified monitoring interval, the following messages are output in the operations log:

periodical alive monitor: Got a slow response x[sec].
And the monitoring interval is x[sec].

Reference: For the setting of monitoring intervals, see Subsection 2.4.9, "Configuring the Setting of Alive Monitor" in *SigmaSystemCenter Configuration Guide*.

1.2.4. Events System Monitor - Performance Monitoring Services Can Detect

System Monitor - Performance Monitoring Services can monitor the load status of a monitored machine, and send alert as an event to SystemProvisioning when the machine exceeds the threshold and when the machine recovers. In addition, if you use the VM Optimized Placement, System Monitor - Performance Monitoring Services notifies SystemProvisioning of the *VM Server high load* event when the load of a virtual machine server exceeds the high load bound, or the *VM Server low load* event when the load of a virtual machine server falls below the low load bound. The Event Categories of events that are notified from System Monitor - Performance Monitoring Services are as follows.

You can check the following error events by specifying "SystemMonitorPerf" in the Report Source box on the Corresponding Event Handler Settings window.

Event Category	Event ID	Event Name	Description
Customized Machine Notification	10000001	Customized machine notification1	Performance data of the target machine exceeded the threshold value / recovered from the excess of the threshold value. *1
	10000002	Customized machine notification2	
	10000003	Customized machine notification3	
	10000004	Customized machine notification4	
	10000005	Customized machine notification5	
	10000006	Customized machine notification6	

Event Category	Event ID	Event Name	Description
	10000007	Customized machine notification7	
	10000008	Customized machine notification8	
	10000009	Customized machine notification9	
	1000000A	Customized machine notification10	
Customized Group Notification	11000001	Customized group notification1	Performance data of the target group exceeded the threshold value / recovered from the excess of the threshold value. *1
	11000002	Customized group notification2	
	11000003	Customized group notification3	
	11000004	Customized group notification4	
	11000005	Customized group notification5	
VM Server Notification	11000006	VM Server high load	The CPU usage rate of the virtual machine server exceeded the high load bound. *2
	11000007	VM Server low load	The CPU usage rate of the virtual machine server fell below the low load bound. *2

*1 You set content of the notification and the threshold values from System Monitor - Performance Monitoring Services.

*2 You set the boundary value from SystemProvisioning.

- Customized Machine Notification: This is used for notifying the performance error event of a single machine. For example, this is used for when SigmaSystemCenter executes recovery process that is triggered by exceeding threshold value of CPU usage of a specific machine. Configure the recovery actions for machines, such as Shutdown machine, Reboot machine, and Replace machine.
- Customized Group Notification: This is used for notifying the performance error event of a group. For example, this is used for when SigmaSystemCenter executes recovery process that is triggered by exceeding threshold value of CPU usage average of machines in a specific group. Configure the recovery actions for groups, such as Scale In and Scale Out.
- VM Server Notification: This is used for notifying SystemProvisioning of the performance error event when you use the VM Optimized Placement. Configure the recovery actions, such as Load balance VM server and Power save VM server.

You can configure the contents of custom notification events on the management console of System Monitor - Performance Monitoring Services.

Reference: See *System Monitor - Performance Monitoring Services User's Guide* for details regarding threshold monitoring and performance data.

1.2.5. Events the VMware (vCenter Server) Compatible Function Can Detect

The events on virtual machines or virtual machine servers that can be detected by working together with VMware (vCenter Server) are as follows.

You can check the following error events by specifying "VMwareProvider" in the Report Source box on the Corresponding Event Handler Settings window.

Classification	Event Category	Error	Description *1
Status of the connection to a virtual machine server	Machine inaccessible error recovery	Alarm Host connection state on VMS changed from gray to green	The response from the virtual machine server is revived.
	Machine inaccessible error	Alarm Host connection state on VMS changed from gray to red	Lost the response from the virtual machine server.
	Others	Alarm Host connection state on VMS changed from green to gray	Lost the response from the virtual machine server.
	Machine inaccessible error	Alarm Host connection state on VMS changed from green to red	Lost the response from the virtual machine server.
	Others	Alarm Host connection state on VMS changed from red to gray	Lost the response from the virtual machine server.
	Machine inaccessible error recovery	Alarm Host connection state on VMS changed from red to green	The response from the virtual machine server is revived.
CPU usage rate on a virtual machine server	CPU load failure recovery	Alarm Host CPU Usage on VMS changed from gray to green	The CPU usage rate of the virtual machine server becomes less than *n* %. (Default value: 75%)
	Others	Alarm Host CPU Usage on VMS changed from gray to yellow	The CPU usage rate of the virtual machine server becomes *n* % or more. (Default value: 75%)
	CPU load failure	Alarm Host CPU Usage on VMS changed from gray to red	The CPU usage rate of the virtual machine server becomes *n* % or more. (Default value: 90%)
	Others	Alarm Host CPU Usage on VMS changed from green to gray	The CPU usage rate of the virtual machine server becomes unknown.

Classification	Event Category	Error	Description *1
	Others	Alarm Host CPU Usage on VMS changed from green to yellow	The CPU usage rate of the virtual machine server becomes *n* % or more. (Default value: 75%)
	CPU load failure	Alarm Host CPU Usage on VMS changed from green to red	The CPU usage rate of the virtual machine server becomes *n* % or more. (Default value: 90%)
	Others	Alarm Host CPU Usage on VMS changed from yellow to gray	The CPU usage rate of the virtual machine server becomes unknown.
	CPU load failure recovery	Alarm Host CPU Usage on VMS changed from yellow to green	The CPU usage rate of the virtual machine server becomes less than *n* %. (Default value: 75%)
	CPU load failure	Alarm Host CPU Usage on VMS changed from yellow to red	The CPU usage rate of the virtual machine server becomes *n* % or more. (Default value: 90%)
	Others	Alarm Host CPU Usage on VMS changed from red to gray	The CPU usage rate of the virtual machine server is unknown.
	CPU load failure recovery	Alarm Host CPU Usage on VMS changed from red to green	The CPU usage rate of the virtual machine server becomes less than *n* %. (Default value: 75%)
	Others	Alarm Host CPU Usage on VMS changed from red to yellow	The CPU usage rate of the virtual machine server becomes less than *n* %. (Default value: 90%)
Usage rate of memory on a virtual machine server	Memory degeneration failure recovery	Alarm Host Memory Usage on VMS changed from gray to green	The memory usage rate of the virtual machine server becomes less than *n* %. (Default value: 75%)
	Others	Alarm Host Memory Usage on VMS changed from gray to yellow	The memory usage rate of the virtual machine server becomes *n* % or more. (Default value: 75%)
	Memory degeneration failure	Alarm Host Memory Usage on VMS changed from gray to red	The memory usage rate of the virtual machine server becomes *n* % or more. (Default value: 90%)

Classification	Event Category	Error	Description *1
	Others	Alarm Host Memory Usage on VMS changed from green to gray	The memory usage rate of the virtual machine server becomes unknown.
	Others	Alarm Host Memory Usage on VMS changed from green to yellow	The memory usage rate of the virtual machine server becomes *n* % or more. (Default value: 75%)
	Memory degeneration failure	Alarm Host Memory Usage on VMS changed from green to red	The memory usage rate of the virtual machine server becomes *n* % or more. (Default value: 90%)
	Others	Alarm Host Memory Usage on VMS changed from yellow to gray	The memory usage rate of the virtual machine server becomes unknown.
	Memory degeneration failure recovery	Alarm Host Memory Usage on VMS changed from yellow to green	The memory usage rate of the virtual machine server becomes less than *n* %. (Default value: 75%)
	Memory degeneration failure	Alarm Host Memory Usage on VMS changed from yellow to red	The memory usage rate of the virtual machine server becomes *n* % or more. (Default value: 90%)
	Others	Alarm Host Memory Usage on VMS changed from red to gray	The memory usage rate of the virtual machine server becomes unknown.
	Memory degeneration failure recovery	Alarm Host Memory Usage on VMS changed from red to green	The memory usage rate of the virtual machine server becomes less than *n* %. (Default value: 75%)
	Others	Alarm Host Memory Usage on VMS changed from red to yellow	The memory usage rate of the virtual machine server is less than *n* %. (Default value: 90%)
Allocation rate of disk on a Datastore	Others	Alarm DataStore Overallocation on disk on DATASTORE changed from gray to green	The allocation rate of the Datastore is less than *n* %. (Default value: 400)
	Others	Alarm Datastore Overallocation on disk on DATASTORE changed from gray to yellow	The allocation rate of the Datastore is less than *n* %. (Default value: 700)

Classification	Event Category	Error	Description *1
	Others	Alarm Datastore Overallocation on disk on DATASTORE changed from gray to red	The allocation rate of the Datastore becomes *n* % or more. (Default value: 700)
	Others	Alarm Datastore Overallocation on disk on DATASTORE changed from green to gray	The allocation rate of the Datastore becomes unknown.
	Others	Alarm Datastore Overallocation on disk on DATASTORE changed from green to yellow	The allocation rate of the Datastore is less than *n* %. (Default value: 700)
	Others	Alarm Datastore Overallocation on disk on DATASTORE changed from green to red	The allocation rate of the Datastore becomes *n* % or more. (Default value: 700)
	Others	Alarm Datastore Overallocation on disk on DATASTORE changed from yellow to gray	The allocation rate of the Datastore becomes unknown.
	Others	Alarm Datastore Overallocation on disk on DATASTORE changed from yellow to green	The allocation rate of the Datastore is less than *n* %. (Default value: 400)
	Others	Alarm Datastore Overallocation on disk on DATASTORE changed from yellow to red	The allocation rate of the Datastore becomes *n* % or more. (Default value: 700)
	Others	Alarm Datastore Overallocation on disk on DATASTORE changed from red to gray.	The allocation rate of the Datastore becomes unknown.
	Others	Alarm Datastore Overallocation on disk on DATASTORE changed from red to green	The allocation rate of the Datastore is less than *n* %. (Default value: 400)
	Others	Alarm Datastore Overallocation on disk on DATASTORE changed from red to yellow	The allocation rate of the Datastore is less than *n* %. (Default value: 700)
Usage rate of disk on a Datastore	Others	Alarm Datastore usage on disk on DATASTORE changed from gray to green	The disk usage rate of the Datastore is less than *n* %. (Default value: 75)

Classification	Event Category	Error	Description *1
	Others	Alarm Datastore usage on disk on DATASTORE changed from gray to yellow	The disk usage rate of the Datastore is less than *n* %. (Default value: 85)
	Others	Alarm Datastore usage on disk on DATASTORE changed from gray to red	The disk usage rate of the Datastore becomes *n* % or more. (Default value: 85)
	Others	Alarm Datastore usage on disk on DATASTORE changed from green to gray	The disk usage rate of the Datastore becomes unknown.
	Others	Alarm Datastore usage on disk on DATASTORE changed from green to yellow	The disk usage rate of the Datastore is less than *n* %. (Default value: 85)
	Others	Alarm Datastore usage on disk on DATASTORE changed from green to red	The disk usage rate of the Datastore becomes *n* % or more. (Default value: 85)
	Others	Alarm Datastore usage on disk on DATASTORE changed from yellow to gray	The disk usage rate of the Datastore becomes unknown.
	Others	Alarm Datastore usage on disk on DATASTORE changed from yellow to green	The disk usage rate of the Datastore is less than *n* %. (Default value: 75)
	Others	Alarm Datastore usage on disk on DATASTORE changed from yellow to red	The disk usage rate of the Datastore becomes *n* % or more. (Default value: 85)
	Others	Alarm Datastore usage on disk on DATASTORE changed from red to gray	The disk usage rate of the Datastore becomes unknown.
	Others	Alarm Datastore usage on disk on DATASTORE changed from red to green	The disk usage rate of the Datastore is less than *n* %. (Default value: 75)
	Others	Alarm Datastore usage on disk on DATASTORE changed from red to yellow	The disk usage rate of the Datastore is less than *n* %. (Default value: 85)
Status of the connection to a Datastore	Hard disk failure	Storage path connectivity on VMS is lost	Cannot access to the Datastore.
	Hard disk failure	VMFS heartbeat on VMS is timedout	VMFS volume connectivity is degraded.
	Others	Storage path redundancy on VMS is lost	Storage redundancy is lost.

Classification	Event Category	Error	Description *1
	Others	Storage path redundancy on VMS is degraded	Storage redundancy is degraded.
Status of the connection to a network	Others	Network connectivity on VMS is lost	Cannot connect to the network.
	Others	Network redundancy on VMS is lost	Network redundancy is lost.
	Others	Network redundancy on VMS is degraded	Network redundancy is degraded.
State of heart beat of a virtual machine	Machine inaccessible error recovery	Alarm Virtual Machine Heartbeat on VM changed from gray to green	The heart beat value of the virtual machine becomes more than the threshold value. (Default value: 5)
	Machine inaccessible error	Alarm Virtual Machine Heartbeat on VM changed from gray to red	The heart beat value of the virtual machine becomes less than the threshold value. (Default value:5)
	Others	Alarm Virtual Machine Heartbeat on VM changed from green to gray	The heart beat value becomes unknown.
	Machine inaccessible error	Alarm Virtual Machine Heartbeat on VM changed from green to red	The heart beat value of the virtual machine becomes less than the threshold value. (Default value: 5)
	Others	Alarm Virtual Machine Heartbeat on VM changed from red to gray	The heart beat value becomes unknown.
	Machine inaccessible error recovery	Alarm Virtual Machine Heartbeat on VM changed from red to green	The heart beat value of the virtual machine becomes more than the threshold value. (Default value: 5)
Power status of a virtual machine	Machine inaccessible error recovery	VM on VMS in DC is powered on	The virtual machine is powered ON.
	Machine inaccessible error	VM on VMS in DC is powered off	The virtual machine is powered OFF.
	Others	VM on VMS in DC is suspended	The virtual machine is suspended.
Usage rate of CPU on a virtual machine	CPU load failure recovery	Alarm Virtual Machine CPU Usage on VM changed from gray to green	The CPU usage rate of the virtual machine becomes less than *n* %. (Default value: 75%)
	Others	Alarm Virtual Machine CPU Usage on VM changed from gray to yellow	The CPU usage rate of the virtual machine becomes *n* % or more. (Default value: 75%)

Classification	Event Category	Error	Description *1
	CPU load failure	Alarm Virtual Machine CPU Usage on VM changed from gray to red	The CPU usage rate of the virtual machine becomes *n* % or more. (Default value: 90%)
	Others	Alarm Virtual Machine CPU Usage on VM changed from green to gray	The CPU usage rate of the virtual machine becomes unknown.
	Others	Alarm Virtual Machine CPU Usage on VM changed from green to yellow	The CPU usage rate of the virtual machine becomes *n* % or more. (Default value: 75%)
	CPU load failure	Alarm Virtual Machine CPU Usage on VM changed from green to red	The CPU usage rate of the virtual machine becomes *n* % or more. (Default value: 90%)
	Others	Alarm Virtual Machine CPU Usage on VM changed from yellow to gray	The CPU usage rate of the virtual machine becomes unknown.
	CPU load failure recovery	Alarm Virtual Machine CPU Usage on VM changed from yellow to green	The CPU usage rate of the virtual machine becomes less than *n* %. (Default value: 75%)
	CPU load failure	Alarm Virtual Machine CPU Usage on VM changed from yellow to red	The CPU usage rate of the virtual machine becomes *n* % or more. (Default value: 90%)
	Others	Alarm Virtual Machine CPU Usage on VM changed from red to gray	The CPU usage rate of the virtual machine becomes unknown.
	CPU load failure recovery	Alarm Virtual Machine CPU Usage on VM changed from red to green	The CPU usage rate of the virtual machine becomes less than *n* %. (Default value: 75%)
	Others	Alarm Virtual Machine CPU Usage on VM changed from red to yellow	The CPU usage rate of the virtual machine becomes less than *n* %. (Default value: 90%)
Usage rate of memory on a virtual machine	Memory degeneration failure recovery	Alarm Virtual Machine Memory Usage on VM changed from gray to green	The CPU usage rate of the virtual machine becomes less than *n* %. (Default value: 75%)
	Others	Alarm Virtual Machine Memory Usage on VM changed from gray to yellow	The memory usage rate of the virtual machine becomes *n* % or more. (Default value: 75%)

Classification	Event Category	Error	Description *1
	Memory degeneration failure	Alarm Virtual Machine Memory Usage on VM changed from gray to red	The memory usage rate of the virtual machine becomes *n* % or more. (Default value: 90%)
	Others	Alarm Virtual Machine Memory Usage on VM changed from green to gray	The memory usage rate of the virtual machine becomes unknown.
	Others	Alarm Virtual Machine Memory Usage on VM changed from green to yellow	The memory usage rate of the virtual machine becomes *n* % or more. (Default value: 75%)
	Memory degeneration failure	Alarm Virtual Machine Memory Usage on VM changed from green to red	The memory usage rate of the virtual machine becomes *n* % or more. (Default value: 90%)
	Others	Alarm Virtual Machine Memory Usage on VM changed from yellow to gray	The memory usage rate of the virtual machine becomes unknown.
	Memory degeneration failure recovery	Alarm Virtual Machine Memory Usage on VM changed from yellow to green	The CPU usage rate of the virtual machine becomes less than *n* %. (Default value: 75%)
	Memory degeneration failure	Alarm Virtual Machine Memory Usage on VM changed from yellow to red	The memory usage rate of the virtual machine becomes *n* % or more. (Default value: 90%)
	Others	Alarm Virtual Machine Memory Usage on VM changed from red to gray	The memory usage rate of the virtual machine becomes unknown.
	Memory degeneration failure recovery	Alarm Virtual Machine Memory Usage on VM changed from red to green	The CPU usage rate of the virtual machine becomes less than *n* %. (Default value: 75%)
	Others	Alarm Virtual Machine Memory Usage on VM changed from red to yellow	The CPU usage rate of the virtual machine becomes less than *n* %. (Default value: 90%)

*1 You can change the CPU usage rate, the memory usage rate, the datastore usage rate and the allocation rate of disk on a datastore in vCenter Server.

Note:

▪ The event of *The heart beat value of the virtual machine is less than the threshold value.* can be detected when you start a virtual machine. In that case, enable the error event controlling function.

For how to configure the function, see Section 4.10.5, "Configuring Policy Property Settings" in *SigmaSystemCenter Configuration Guide*.

▪ The alarm definitions of virtual machines in Heartbeat status and events of the allocation rate of disk on a datastore are disabled by default.

To enable the alarm definitions of virtual machines in Heartbeat status, create or change the registry below and restart the PVMService.

Key:

HKEY_LOCAL_MACHINE\SOFTWARE\NEC\PVM\Provider\VM\VMware\Event

Value Name (Type): DisableHeartbeatEvent (REG_DWORD)

Value: 0

To enable events of the allocation rate of disk on a datastore, create or change the registry below and restart the PVMService.

Key:

HKEY_LOCAL_MACHINE\SOFTWARE\NEC\PVM\Provider\VM\VMware\Event

Value Name (Type): DisableDatastore (REG_DWORD)

Value: 0

1.2.6. Events the VMware (ESXi) Compatible Function Can Detect

The events on virtual machines or virtual machine servers that can be detected by working together with VMware (ESXi) are as follows.

You can check the following error events by specifying "StandaloneEsxProvider" in the Report Source box on the Corresponding Event Handler Settings window.

Event Category	Error	Description
Hard disk failure	Alarm Datastore on VMS can not be available	Cannot use Datastore from a virtual machine server.
	VMFS heartbeat on VMS is timedout	VMFS volume connectivity is degraded.
Machine inaccessible error	Alarm Host connection state on VMS changed from green to red	Lost the response from the virtual machine server.
Machine inaccessible error recovery	Alarm Host connection state on VMS changed from red to green	The response from the virtual machine server is revived.

Note:

▪ If you execute the restart operation of the PVMService and a virtual machine server, the "Hard disk failure" event that has already notified might be notified again.

▪ There is a case where the "Hard disk failure" is notified if a network failure occurs while SigmaSystemCenter is checking the datastore.

1.2.7. Events the Optimized Placement Can Detect

The events that the Optimized Placement can detect are as follows.

You can check the following events by specifying "VM Optimized Placement notification" in the Event Category box on the Corresponding Event Handler Settings window.

Event Category	Event	Event Name	Description
VM Optimized Placement notification	Scaleout Recommendation	Scaleout Recommendation	As a result of load balancing, a virtual machine that can be moved is detected, but there is not virtual machine server in a group that can be a destination.
VM Optimized Placement notification	Resource-Pool Critical Asserted	Resource Pool Consumption : Critical Asserted	The value exceeded its threshold (100% by default) in consumption/actually consumption of resource pool.
VM Optimized Placement notification	Resource-Pool Warning Asserted	Resource Pool Consumption : Warning Asserted	The value exceeded its threshold (80% by default) in consumption/actually consumption of resource pool.
VM Optimized Placement notification	Resource-Pool Info Asserted	Resource Pool Consumption : Info Asserted	The value exceeded its threshold (60% by default) in consumption/actually consumption of resource pool.
VM Optimized Placement notification	Resource-Pool Critical Deasserted	Resource Pool Consumption : Critical Deasserted	The value below its threshold (100% by default) in consumption/actually consumption of resource pool.
VM Optimized Placement notification	Resource-Pool Warning Deasserted	Resource Pool Consumption : Warning Deasserted	The value below its threshold (80% by default) in consumption/actually consumption of resource pool.

Event Category	Event	Event Name	Description
VM Optimized Placement notification	Resource-Pool Info Deasserted	Resource Pool Consumption : Info Deasserted	The value below its threshold (60% by default) in consumption/actually consumption of resource pool.

Note: The "Scaleout Recommendation" and resource pool consumption notification event reports resource deficiency of a group. Configure the recovery process against the event for the group, not for each machine. Configuring the event to detect optimized placement are unnecessary because the event is an internal event of SystemProvisioning.

1.2.8. Events the Out-of-Band Management Can Detect

The events that the Out-of-Band Management can detect are as follows.

You can check the following error events by specifying the category in the Event Category and "OobManagement" in the Report Source.

Classification	Event Category	Event ID	Message	Description
Temperature	Prediction:chassis temperature failure	[PET] 0x00010102	Temperature: Lower Critical - going low	Fell below the lower critical limit of the temperature.
		[PET] 0x00010104	Temperature: Lower Non-recoverable - going low	Fell below the lower non-recoverable limit of the temperature.
		[PET] 0x00010109	Temperature: Upper Critical - going high	Exceeded the upper critical limit of the temperature.
		[PET] 0x0001010B	Temperature: Upper Non-recoverable - going high	Exceeded the upper non-recoverable limit of the temperature.
	Clear Alert: chassis temperature failure recovery	[PET] 0x80010102	Temperature: Lower Critical - going high	Recovered from the lower critical limit of the temperature.
		[PET] 0x80010109	Temperature: Upper Critical - going low	Recovered from the upper critical limit of the temperature.
	Others	[PET] 0x00010100	Temperature: Lower Non-critical - going low	Fell below the lower warning limit of the temperature.
		[PET] 0x80010100	Temperature: Lower Non-critical - going high	Recovered from the lower warning limit of the temperature.
		[PET] 0x80010104	Temperature: Lower Non-recoverable - going high	Recovered from the lower non-recoverable limit of the temperature.
		[PET] 0x00010107	Temperature: Upper Non-critical - going high	Exceeded the upper warning limit of the temperature.

Classification	Event Category	Event ID	Message	Description
		[PET] 0x80010107	Temperature: Upper Non-critical - going low	Recovered from the upper warning limit of the temperature.
		[PET] 0x8001010B	Temperature: Upper Non-recoverable - going low	Recovered from the upper non-recoverable limit of the temperature.
		[PET] 0x00010301	Temperature: Monitoring event occurred	An event of the temperature occurred.
		[PET] 0x80010301	Temperature: Monitoring event cleared	Recovered from an even of the temperature.
		[PET] 0x00010501	Temperature: Limit Exceeded	The temperature exceeded the limit.
		[PET] 0x80010501	Temperature: Limit Not Exceeded	The temperature did not exceed the limit.
		[PET] 0x00010700	Temperature: Transition to OK	The temperature became normal.
		[PET] 0x80010700	Temperature: Transition to Abnormal	The temperature became abnormal.
		[PET] 0x00010701	Temperature: Transition to Non-Critical	The temperature became the warning level.
		[PET] 0x00010702	Temperature: Transition to Critical	The temperature became the critical level.
		[PET] 0x00010703	Temperature: Transition to Non-recoverable	The temperature became the non-recoverable level.
Voltage	Prediction: voltage failure	[PET] 0x00020102	Voltage: Lower Critical - going low	Fell under the lower critical limit of the voltage.
		[PET] 0x00020104	Voltage: Lower Non-recoverable - going low	Fell under the lower non-recoverable limit of the voltage.
		[PET] 0x00020109	Voltage: Upper Critical - going high	Exceeded the upper critical limit of the voltage.
		[PET] 0x0002010B	Voltage: Upper Non-recoverable - going high	Exceeded the upper non-recoverable limit of the voltage.
		[PET] 0x00020703	Voltage: Transition to Non-recoverable	The voltage became the non-recoverable level.
	Clear Alert: voltage failure recovery	[PET] 0x80020102	Voltage: Lower Critical - going high	Recovered from the lower critical limit of the voltage.
		[PET] 0x80020109	Voltage: Upper Critical - going low	Recovered from the upper critical limit of the voltage.
		[PET] 0x00020700	Voltage: Transition to OK	The voltage became normal.
	Others	[PET] 0x00020100	Voltage: Lower Non-critical - going low	Fell below the lower warning limit of the voltage.

Classification	Event Category	Event ID	Message	Description
		[PET] 0x80020100	Voltage: Lower Non-critical - going high	Recovered from the lower warning limit of the voltage.
		[PET] 0x80020104	Voltage: Lower Non-recoverable - going high	Recovered from the lower non-recoverable limit of the voltage.
		[PET] 0x00020107	Voltage: Upper Non-critical - going high	Exceeded the upper warning limit of the voltage.
		[PET] 0x80020107	Voltage: Upper Non-critical - going low	Recovered from the upper warning limit of the voltage.
		[PET] 0x8002010B	Voltage: Upper Non-recoverable - going low	Recovered from the upper non-recoverable limit of the voltage.
		[PET] 0x00020301	Voltage: Monitoring event occurred	An event of the voltage occurred.
		[PET] 0x80020301	Voltage: Monitoring event cleared	Recovered from an event of the voltage.
		[PET] 0x00020501	Voltage: Limit Exceeded	The voltage exceeded the limit.
		[PET] 0x80020501	Voltage: Limit Not Exceeded	The voltage did not exceed the limit.
		[PET] 0x00020601	Voltage: Performance Lags	Detected the voltage warning.
		[PET] 0x80020601	Voltage: Performance Met	Recovered from the voltage warning.
		[PET] 0x80020700	Voltage: Transition to Abnormal	The voltage became abnormal.
		[PET] 0x00020701	Voltage: Transition to Non-Critical	The voltage became the warning level.
		[PET] 0x00020702	Voltage: Transition to Critical	The voltage became the critical level.
Current	Others	[PET] 0x00030301	Current: Monitoring event occurred	An event of voltage / electric currents occurred.
		[PET] 0x80030301	Current: Monitoring event cleared	Recovered from an event of voltage / electric currents.
		[PET] 0x00030501	Current: Limit Exceeded	Voltage / electric currents exceeded the limit.
		[PET] 0x80030501	Current: Limit Not Exceeded	Voltage / electric currents did not exceed the limit.
FAN	Prediction:fan/cooling device failure	[PET] 0x00040102	Fan(Speed): Lower Critical - going low	The number of revolution of FAN fell below the lower critical limit.
		[PET] 0x00040104	Fan(Speed): Lower Non-recoverable - going low	The number of revolution of FAN fell below the lower non-recoverable limit.
		[PET] 0x00040109	Fan(Speed): Upper Critical - going high	The number of revolution of FAN exceeded the upper critical limit.

Classification	Event Category	Event ID	Message	Description
		[PET] 0x0004010B	Fan(Speed): Upper Non-recoverable - going high	The number of revolution of FAN exceeded the upper non-recoverable limit.
		[PET] 0x00040301	Fan(Speed): Monitoring event occurred	An event of FAN occurred.
	Clear Alert: fan/cooling device failure recovery	[PET] 0x80040102	Fan(Speed): Lower Critical - going high	The number of revolution of FAN recovered from the lower critical limit.
		[PET] 0x80040109	Fan(Speed): Upper Critical - going low	The number of revolution of FAN recovered from the upper critical limit.
		[PET] 0x80040301	Fan(Speed): Monitoring event cleared	Recovered from an event of FAN.
	Others	[PET] 0x00040100	Fan(Speed): Lower Non-critical - going low	The number of revolution of FAN fell below the lower warning limit.
		[PET] 0x80040100	Fan(Speed): Lower Non-critical - going high	The number of revolution of FAN recovered from the lower warning limit.
		[PET] 0x80040104	Fan(Speed): Lower Non-recoverable - going high	The number of revolution of FAN recovered from the lower non-recoverable limit.
		[PET] 0x00040107	Fan(Speed): Upper Non-critical - going high	The number of revolution of FAN exceeded the upper warning limit.
		[PET] 0x80040107	Fan(Speed): Upper Non-critical - going low	The number of revolution of FAN recovered from the upper warning limit.
		[PET] 0x8004010B	Fan(Speed): Upper Non-recoverable - going low	The number of revolution of FAN recovered from the upper non-recoverable limit.
		[PET] 0x00040401	Fan(Speed): Predictive Failure occurred	The FAN status exceeded the limit.
		[PET] 0x80040401	Fan(Speed): Predictive Failure cleared	The FAN status became did not exceed the limit.
		[PET] 0x00040601	Fan(Speed): Performance Lags	Detected the FAN warning.
		[PET] 0x80040601	Fan(Speed): Performance Met	Recovered the FAN warning.
		[PET] 0x00040700	Fan(Speed): Transition to OK	The FAN became normal.
		[PET] 0x80040700	Fan(Speed): Transition to Abnormal	FAN became abnormal.
		[PET] 0x00040701	Fan(Speed): Transition to Non-Critical	The FAN became the warning level.

Classification	Event Category	Event ID	Message	Description
		[PET] 0x00040702	Fan(Speed): Transition to Critical	The FAN became the critical level.
		[PET] 0x00040703	Fan(Speed): Transition to Non-recoverable	The FAN became non-recoverable level.
		[PET] 0x00040B00	Fan(Speed): Redundancy Full	The FAN is redundant configuration.
		[PET] 0x00040B01	Fan(Speed): Redundancy Lost	The FAN became not redundant configuration.
		[PET] 0x00040B02	Fan(Speed): Redundancy Degraded	The FAN is not redundant configuration but available.
		[PET] 0x00040B03	Fan(Speed): Non-Redundant(Sufficient Resources)	The FAN is non-redundant configuration.
		[PET] 0x00040B05	Fan(Speed): Non-Redundant(Insufficient Resources)	The FAN is non-redundant configuration and unavailable.
Security	Others	[PET] 0x00050301	Physical Security(Chassis Intrusion): Monitoring event occurred	The cover opened.
		[PET] 0x80050301	Physical Security(Chassis Intrusion): Monitoring event cleared	The cover closed.
		[PET] 0x00056F00	Physical Security(Chassis Intrusion): General Chassis Intrusion occurred	The cover opened.
		[PET] 0x80056F00	Physical Security(Chassis Intrusion): General Chassis Intrusion cleared	The cover closed.
		[PET] 0x00056F01	Physical Security(Chassis Intrusion): Drive Bay Intrusion occurred	The Drive Bay cover opened.
		[PET] 0x80056F01	Physical Security(Chassis Intrusion): Drive Bay Intrusion cleared	The Drive Bay cover closed.
		[PET] 0x00056F02	Physical Security(Chassis Intrusion): I/O Card area Intrusion occurred	The cover of IO card area opened.
		[PET] 0x80056F02	Physical Security(Chassis Intrusion): I/O Card area Intrusion cleared	The cover of IO card area closed.

Classification	Event Category	Event ID	Message	Description
		[PET] 0x00056F03	Physical Security(Chassis Intrusion): Processor area Intrusion occurred	The cover of CPU area opened.
		[PET] 0x80056F03	Physical Security(Chassis Intrusion): Processor area Intrusion cleared	The cover of CPU area closed.
		[PET] 0x00056F04	Physical Security(Chassis Intrusion): LAN Leash Lost (System is unplugged from LAN) occurred	The LAN cable is disconnected.
		[PET] 0x80056F04	Physical Security(Chassis Intrusion): LAN Leash Lost (System is unplugged from LAN) cleared	The LAN cable is connected.
		[PET] 0x00056F05	Physical Security(Chassis Intrusion): Unauthorized dock occurred	Unauthorized dock occurred.
		[PET] 0x80056F05	Physical Security(Chassis Intrusion): Unauthorized dock cleared	Unauthorized dock cleared.
		[PET] 0x00056F06	Physical Security(Chassis Intrusion): FAN area intrusion occurred	The FAN cover opened.
		[PET] 0x80056F06	Physical Security(Chassis Intrusion): FAN area intrusion cleared	The FAN cover closed.
Security Violation	Others	[PET] 0x00066F00	Platform Security Violation Attempt: Secure Mode (Front Panel Lockout) Violation attempt	Front Panel Lockout
		[PET] 0x00066F01	Platform Security Violation Attempt: Pre-boot Password Violation - user password	Entered an incorrect user password.
		[PET] 0x00066F02	Platform Security Violation Attempt: Pre-boot Password Violation - setup password	Entered an incorrect setup password.

Classification	Event Category	Event ID	Message	Description
		[PET] 0x00066F03	Platform Security Violation Attempt: Pre-boot Password Violation - network boot password	Entered an incorrect network boot password.
		[PET] 0x00066F04	Platform Security Violation Attempt: Other pre-boot Password Violation	Entered an incorrect password.
		[PET] 0x00066F05	Platform Security Violation Attempt: Out-of-band Access Password Violation	OOB access password violation.
CPU	CPU failure	[PET] 0x00070702	Processor: Transition to Critical	CPU became critical.
		[PET] 0x00070703	Processor: Transition to Non-recoverable	CPU became non-recoverable.
		[PET] 0x00076F00	Processor: IERR occurred	A CPU internal error occurred.
		[PET] 0x00076F02	Processor: FRB1/BIST failure occurred	A CPU error occurred.
		[PET] 0x00076F04	Processor: FRB3/Processor Startup/Initialization failure (CPU didn't start) occurred	An initialization error occurred.
		[PET] 0x00076F08	Processor: Processor disabled	CPU was disabled.
	CPU temperature failure	[PET] 0x00076F01	Processor: Thermal Trip occurred	CPU thermal trip occurred.
	CPU temperature failure recovery	[PET] 0x80076F01	Processor: Thermal Trip cleared	CPU thermal trip ended.
	Others	[PET] 0x00070700	Processor: Transition to OK	CPU became normal.
		[PET] 0x80070700	Processor: Transition to Abnormal	CPU became abnormal.
		[PET] 0x00070701	Processor: Transition to Non-Critical	CPU became non-critical.
		[PET] 0x80076F00	Processor: IERR cleared	Recovered from the CPU internal error.
		[PET] 0x80076F02	Processor: FRB1/BIST failure cleared	Recovered from the CPU error.
		[PET] 0x00076F03	Processor: FRB2/Hang in POST failure occurred	Hang in POST failure occurred.
		[PET] 0x80076F03	Processor: FRB2/Hang in POST failure cleared	Recovered from the Hang in POST failure.

Classification	Event Category	Event ID	Message	Description
		[PET] 0x80076F04	Processor: FRB3/Processor Startup/Initialization failure (CPU didn't start) cleared	Recovered from the initialization error.
		[PET] 0x00076F05	Processor: Configuration Error occurred	A CPU configuration error occurred.
		[PET] 0x80076F05	Processor: Configuration Error cleared	Recovered from the CPU configuration error.
		[PET] 0x00076F06	Processor: SM BIOS 'Uncorrectable CPU-complex Error' occurred	A System error occurred on the system bus.
		[PET] 0x80076F06	Processor: SM BIOS 'Uncorrectable CPU-complex Error' cleared	Recovered from the system error on the system bus.
		[PET] 0x00076F07	Processor: Processor Presence detected	CPU is implemented.
		[PET] 0x80076F07	Processor: Processor Removed	CPU is removed.
		[PET] 0x80076F08	Processor: Processor Enabled	CPU is enabled.
		[PET] 0x00076F09	Processor: Terminator Presence Detected	The terminator is implemented.
		[PET] 0x80076F09	Processor: Terminator Removed	The terminator is removed.
		[PET] 0x00076F0A	Processor: Processor Automatically Throttled	A CPU automatically throttle occurred.
		[PET] 0x80076F0A	Processor: Processor Recovered from Automatically Throttled	Recovered from a CPU automatically throttle.
Power Supply	Others	[PET] 0x00080301	Power Supply: Monitoring event occurred	An even t of the power supply device occurred.
		[PET] 0x80080301	Power Supply: Monitoring event cleared	Recovered from a power supply device event.
		[PET] 0x00080700	Power Supply: Transition to OK	The power supply device became normal.
		[PET] 0x80080700	Power Supply: Transition to Abnormal	The power supply device became abnormal.
		[PET] 0x00080701	Power Supply: Transition to Non-Critical	The power supply device became warning status.
		[PET] 0x00080702	Power Supply: Transition to Critical	The power supply device became critical.

Classification	Event Category	Event ID	Message	Description
		[PET] 0x00080703	Power Supply: Transition to Non-recoverable	The power supply device became non-recoverable.
		[PET] 0x00080B00	Power Supply: Redundancy Full	The power supply device is redundant configuration.
		[PET] 0x00080B01	Power Supply: Redundancy Lost	The power supply device became not redundant configuration.
		[PET] 0x00080B02	Power Supply: Redundancy Degraded	The power supply device is non-redundant configuration but available.
		[PET] 0x00080B03	Power Supply: Non-Redundant(Sufficient Resources)	The power supply device is non-redundant configuration.
		[PET] 0x00080B05	Power Supply: Non-Redundant(Insufficient Resources)	The FAN is non-redundant configuration and unavailable.
		[PET] 0x00086F00	Power Supply: Presence detected	The power supply device was detected.
		[PET] 0x80086F00	Power Supply: Removed	The power supply device was removed.
		[PET] 0x00086F01	Power Supply: Power Supply Failure detected	The power supply device's failure was detected.
		[PET] 0x80086F01	Power Supply: Power Supply Recovered	The power supply device recovered.
		[PET] 0x00086F02	Power Supply: Predictive Failure detected	Predictive failure was detected on the power supply device.
		[PET] 0x00086F03	Power Supply: Power Supply input lost (AC/DC)	Power supply input from the power supply device is lost.
		[PET] 0x00086F04	Power Supply: Power Supply input lost or out-of-range	Power supply input from the power supply device is lost or out-of-range.
		[PET] 0x00086F05	Power Supply: Power Supply input out-of-range, but present	Power supply input from the power supply device is out-of-range.
		[PET] 0x00086F06	Power Supply: Configuration error occurred	Configuration error of the power supply device occurred.
Power Unit	Prediction:power unit failure	[PET] 0x00090B05	Power Unit: Non-Redundant(Insufficient Resources)	The power unit is non-redundant configuration and unavailable.
	Others	[PET] 0x00090901	Power Unit: Device Enabled	The power unit is enabled.
		[PET] 0x80090901	Power Unit: Device Disabled	The power unit is disabled.
		[PET] 0x00090B00	Power Unit: Redundancy Full	The power unit is redundant.

Classification	Event Category	Event ID	Message	Description
		[PET] 0x00090B01	Power Unit: Redundancy Lost	The power unit became non-redundant.
		[PET] 0x00090B02	Power Unit: Redundancy Degraded	The power unit became non-redundant but available.
		[PET] 0x00090B03	Power Unit: Non-Redundant(Sufficient Resources)	The power unit is non-redundant configuration.
		[PET] 0x00090C00	Power Unit: D0 Power State	Device Power State is D0.
		[PET] 0x00090C01	Power Unit: D1 Power State	Device Power State is D1.
		[PET] 0x00090C02	Power Unit: D2 Power State	Device Power State is D2.
		[PET] 0x00090C03	Power Unit: D3 Power State	Device Power State is D3.
		[PET] 0x00096F00	Power Unit: Power Off / Power Down	The power unit is powered OFF.
		[PET] 0x80096F00	Power Unit: Power ON	The power unit is powered ON.
		[PET] 0x00096F01	Power Unit: Power Cycle	Power Cycle was executed.
		[PET] 0x00096F02	Power Unit: 240VA Power Down	240VA is Power Down.
		[PET] 0x00096F03	Power Unit: Interlock Power Down	The side cover was opened and Power Down was executed.
		[PET] 0x00096F04	Power Unit: AC lost	AC is lost.
		[PET] 0x00096F05	Power Unit: Soft Power Control Failure (unit did not respond to request to turn on)	Power Control by software failed.
		[PET] 0x80096F05	Power Unit: Soft Power Control Failure cleared	Power Control by software recovered.
		[PET] 0x00096F06	Power Unit: Power Unit Failure detected	Power unit failure occurred.
		[PET] 0x80096F06	Power Unit: Power Unit Failure cleared	Recovered from the power unit failure.
		[PET] 0x00096F07	Power Unit: Predictive Failure detected	Detected the predictive failure of the power unit.
		[PET] 0x80096F07	Power Unit: Predictive Failure cleared	Cleared the predictive failure of the power unit.
Cooling Device	Prediction:fan/cooling device failure	[PET] 0x000A0102	Cooling Device: Lower Critical - going low	Fell below the lower critical limit of the cooling device.
		[PET] 0x000A0104	Cooling Device: Lower Non-recoverable - going low	Fell below the lower non-recoverable limit of the cooling device.

Classification	Event Category	Event ID	Message	Description
		[PET] 0x000A0109	Cooling Device: Upper Critical - going high	Exceeded the upper critical limit of the cooling device.
		[PET] 0x000A010B	Cooling Device: Upper Non-recoverable - going high	Exceeded the upper non-recoverable limit of the cooling device.
		[PET] 0x000A0702	Cooling Device: Transition to Critical	The cooling device became the critical level. The liquid might spill.
	Clear Alert: fan/cooling device failure recovery	[PET] 0x800A0102	Cooling Device: Lower Critical - going high	Recovered from the lower critical limit of the cooling device.
		[PET] 0x800A0109	Cooling Device: Upper Critical - going low	Fell below the upper critical limit of the cooling device.
		[PET] 0x000A0700	Cooling Device: Transition to OK	The cooling device became normal.
	Others	[PET] 0x000A0100	Cooling Device: Lower Non-critical - going low	Fell below the lower warning limit of the cooling device.
		[PET] 0x800A0100	Cooling Device: Lower Non-critical - going high	Recovered from the lower warning limit of the cooling device.
		[PET] 0x800A0104	Cooling Device: Lower Non-recoverable - going high	Recovered from the lower non-recoverable limit of the cooling device.
		[PET] 0x000A0107	Cooling Device: Upper Non-critical - going high	Exceeded the upper warning limit of the cooling device.
		[PET] 0x800A0107	Cooling Device: Upper Non-critical - going low	Recovered from the upper warning limit of the cooling device.
		[PET] 0x800A010B	Cooling Device: Upper Non-recoverable - going low	Recovered from the upper non-recoverable limit of the cooling device.
		[PET] 0x800A0700	Cooling Device: Transition to Abnormal	The cooling device became abnormal.
		[PET] 0x000A0701	Cooling Device: Transition to Non-Critical	The cooling device became the warning level.
		[PET] 0x000A0703	Cooling Device: Transition to Non-recoverable	The cooling device became the non-recoverable level. The liquid might spill.
		[PET] 0x000A0B00	Cooling Device: Redundancy Full	The cooling device is redundant configuration.
		[PET] 0x000A0B01	Cooling Device: Redundancy Lost	The cooling device became not redundant configuration.

Classification	Event Category	Event ID	Message	Description
		[PET] 0x000A0B02	Cooling Device: Redundancy Degraded	The cooling device is not redundant but available.
		[PET] 0x000A0B03	Cooling Device: Non-Redundant(Sufficient Resources)	The cooling device is non-redundant configuration.
		[PET] 0x000A0B05	Cooling Device: Non-Redundant(Insufficient Resources)	The cooling device is non-redundant configuration and unavailable.
Memory	Memory failure	[PET] 0x000C6F01	Memory: Uncorrectable ECC occurred	Uncorrectable ECC error occurred.
		[PET] 0x000C6F02	Memory: Memory Parity Error occurred.	Memory Parity Error occurred.
		[PET] 0x000C0702	Memory: Transition to Critical	The memory became critical.
		[PET] 0x000C0703	Memory: Transition to Non-recoverable	Memory became non-recoverable.
	Memory failure recovery	[PET] 0x800C6F01	Memory: Uncorrectable ECC cleared	Recovered from Uncorrectable ECC error.
	Others	[PET] 0x000C0700	Memory: Transition to OK	The memory became normal.
		[PET] 0x800C0700	Memory: Transition to Abnormal	The memory became abnormal.
		[PET] 0x000C0701	Memory: Transition to Non-Critical	The memory became the warning status.
		[PET] 0x000C0B00	Memory: Redundancy Full	The memory is redundant configuration.
		[PET] 0x000C0B01	Memory: Redundancy Lost	The memory became not redundant configuration.
		[PET] 0x000C0B02	Memory: Redundancy Degraded	The memory is not redundant but available.
		[PET] 0x000C0B03	Memory: Non-Redundant(Sufficient Resources)	The memory is non-redundant configuration.
		[PET] 0x000C0B05	Memory: Non-Redundant(Insufficient Resources)	The memory is non-redundant configuration and unavailable.
		[PET] 0x000C6F00	Memory: Correctable ECC occurred	1bit error occurred.
		[PET] 0x800C6F00	Memory: Correctable ECC cleared	Recovered from 1bit error.
		[PET] 0x800C6F02	Memory: Memory Parity Error cleared	Recovered from Memory Parity Error.
		[PET] 0x000C6F03	Memory: Memory Scrub Failed (stuck bit)	Memory Scrub failed.
		[PET] 0x800C6F03	Memory: Memory Scrub Error cleared (stuck bit)	Recovered from Memory Scrub error.

Classification	Event Category	Event ID	Message	Description
		[PET] 0x000C6F04	Memory: Memory Device Disabled	The memory is disabled.
		[PET] 0x800C6F04	Memory: Memory Device Enabled	The memory is enabled.
		[PET] 0x000C6F05	Memory: Correctable ECC / other correctable memory error logging limit reached	1bit error occurs frequently.
		[PET] 0x800C6F05	Memory: Correctable ECC have receded.	1bit error was receded.
		[PET] 0x000C6F06	Memory: Presence detected	The memory is implemented.
		[PET] 0x800C6F06	Memory: Removed	The memory is removed.
		[PET] 0x000C6F07	Memory: Configuration error	Memory configuration error occurred.
		[PET] 0x800C6F07	Memory: Configuration Error cleared	Recovered from memory configuration error.
		[PET] 0x000C6F08	Memory: Spare entity	A spare of the memory.
		[PET] 0x800C6F08	Memory: Not spare entity	Primary memory.
		[PET] 0x000C6F09	Memory: Memory Automatically Throttled.	The memory automatically throttle occurred.
		[PET] 0x800C6F09	Memory: Memory recovered from Automatically Throttled.	Recovered from the memory automatically throttle.
		[PET] 0x000C6F0A	Memory: Critical Overtemperature.	Over temperature of the memory occurred.
		[PET] 0x800C6F0A	Memory: Memory Temperature Error Recovered	Recovered from the over temperature of the memory.
Slot	Others	[PET] 0x000D0801	Drive Slot(Bay): Device Inserted/Device Present	Devices are implemented on the slot.
		[PET] 0x800D0801	Drive Slot(Bay): Device Removed/Device Absent	Devices are removed from the slot.
		[PET] 0x000D6F00	Drive Slot(Bay): Device Presence	Devices are implemented on the slot.
		[PET] 0x800D6F00	Drive Slot(Bay): Removed	Devices are removed from the slot.
		[PET] 0x000D6F01	Drive Slot(Bay): Drive Fault	The failure of the drive device of the slot occurred.

Classification	Event Category	Event ID	Message	Description
		[PET] 0x800D6F01	Drive Slot(Bay): Drive Recovered	Recovered from the failure of the drive device of the slot.
POST Memory	Memory degeneration failure	[PET] 0x000E0301	POST Memory Resize: Monitoring event occurred	Memory resize occurred.
	Memory failure recovery	[PET] 0x800E0301	POST Memory Resize: Monitoring event cleared	Recovered from the memory resize.
POST Error	Others	[PET] 0x000F0301	POST Error: Monitoring event occurred	POST error occurred.
		[PET] 0x800F0301	POST Error: Monitoring event cleared	Recovered from the POST error.
		[PET] 0x000F6F00	POST Error: System Firmware Error.	Firmware error occurred.
Event logging	Others	[PET] 0x00106F00	Event Logging: Correctable Memory Error Logging Disabled	1bit error records are invalid.
		[PET] 0x00106F01	Event Logging: Specific Event Logging Disabled	Specified events records are invalid.
		[PET] 0x00106F02	Event Logging: Log Area Reset / Cleared	All event logs were deleted.
		[PET] 0x00106F03	Event Logging: All Event Logging Disabled	All events records are invalid.
		[PET] 0x00106F04	Event Logging: SEL Full	SEL space is full. Delete SEL.
		[PET] 0x00106F05	Event Logging: SEL Almost Full	SEL space is almost full. Delete SEL.
System Event	Others	[PET] 0x00126F00	System Event: System Reconfigured	The system was reconfigured.
		[PET] 0x00126F01	System Event: OEM System Boot Event	OEM System Boot Event occurred.
		[PET] 0x00126F02	System Event: Undetermined system hardware failure	Undetermined system hardware failure occurred.
Critical Interrupt	Others	[PET] 0x00136F00	Critical Interrupt: Front Panel NMI (Dump Switch)	The Dump Switch was pushed.
		[PET] 0x00136F01	Critical Interrupt: Bus Timeout(EISA/ISA Bus)	Bus Timeout occurred.
		[PET] 0x00136F02	Critical Interrupt: I/O channel check NMI	I/O channel check by NMI occurred.
		[PET] 0x00136F03	Critical Interrupt: Software NMI	Software NMI occurred.
		[PET] 0x00136F04	Critical Interrupt: PCI PERR	PCI PERR occurred.

Classification	Event Category	Event ID	Message	Description
		[PET] 0x00136F05	Critical Interrupt: PCI SERR	PCI SERR occurred.
		[PET] 0x00136F06	Critical Interrupt: EISA Fail Safe Timeout	EISA Fail Safe Timeout occurred.
		[PET] 0x00136F07	Critical Interrupt: Bus Correctable Error	Bus Correctable Error occurred.
		[PET] 0x00136F08	Critical Interrupt: Bus Uncorrectable Error	Bus Uncorrectable Error occurred.
		[PET] 0x00136F09	Critical Interrupt: Fatal NMI (port61h bit7)	Fatal NMI occurred.
		[PET] 0x00136F0A	Critical Interrupt: Bus Fatal error	Bus Fatal error occurred.
Button/Switch	Others	[PET] 0x00140801	Button/Switch: Device Inserted/Device Present	The button is implemented.
		[PET] 0x80140801	Button/Switch: Device Removed/Device Absent	The button was removed.
		[PET] 0x00146F00	Button/Switch: Power Button pressed	The power button was pressed.
		[PET] 0x00146F01	Button/Switch: Sleep Button pressed	The sleep button was pressed.
		[PET] 0x00146F02	Button/Switch: Reset Button pressed	The reset button was pressed.
Module/Board	Others	[PET] 0x00150301	Module/Board: Monitoring event occurred	The module failure occurred.
		[PET] 0x80150301	Module/Board: Monitoring event cleared	Recovered from the module failure.
		[PET] 0x00150700	Module/Board: Transition to OK	The module became normal.
		[PET] 0x80150700	Module/Board: Transition to Abnormal	The module became abnormal.
		[PET] 0x00150701	Module/Board: Transition to Non-Critical	The module became the warning status.
		[PET] 0x00150702	Module/Board: Transition to Critical	The module became critical.
		[PET] 0x00150703	Module/Board: Transition to Non-recoverable	The module became non-recoverable.
		[PET] 0x00150801	Module/Board: Device Inserted/Device Present	The module is implemented.
		[PET] 0x80150801	Module/Board: Device Removed/Device Absent	The module was removed.
Chassis	Others	[PET] 0x00180700	Chassis: Transition to OK	The chassis became normal.

Classification	Event Category	Event ID	Message	Description
		[PET] 0x80180700	Chassis: Transition to Abnormal	The chassis became abnormal.
		[PET] 0x00180701	Chassis: Transition to Non-Critical	The chassis became the warning status.
		[PET] 0x00180702	Chassis: Transition to Critical	The chassis became critical.
		[PET] 0x00180703	Chassis: Transition to Non-recoverable	The chassis became non-recoverable.
Chip set	Others	[PET] 0x00190700	Chip Set: Transition to OK	The chip set became normal.
		[PET] 0x80190700	Chip Set: Transition to Abnormal	The chip set became abnormal.
		[PET] 0x00190701	Chip Set: Transition to Non-Critical	The chip set became the warning status.
		[PET] 0x00190702	Chip Set: Transition to Critical	The chip set became critical.
		[PET] 0x00190703	Chip Set: Transition to Non-recoverable	The chip set became non-recoverable.
Cable	Others	[PET] 0x001B0700	Cable/Interconnect: Transition to OK	The cable became normal.
		[PET] 0x801B0700	Cable/Interconnect: Transition to Abnormal	The cable became abnormal.
		[PET] 0x001B0701	Cable/Interconnect: Transition to Non-Critical	The cable became the warning status.
		[PET] 0x001B0702	Cable/Interconnect: Transition to Critical	The cable became critical.
		[PET] 0x001B0703	Cable/Interconnect: Transition to Non-recoverable	The cable became non-recoverable.
		[PET] 0x001B0801	Cable/Interconnect: Device Inserted/Device Present	The cable is implemented.
		[PET] 0x801B0801	Cable/Interconnect: Device Removed/Device Absent	The cable was removed.
		[PET] 0x001B6F00	Cable/Interconnect: Cable/Interconnect is connected	The cable is connected.
		[PET] 0x801B6F00	Cable/Interconnect: Cable/Interconnect is disconnected	The cable is disconnected.
		[PET] 0x001B6F01	Cable/Interconnect: Configuration Error - Incorrect cable connected / Incorrect interconnection	Configuration error occurred. Incorrect cable is connected.

Classification	Event Category	Event ID	Message	Description
		[PET] 0x801B6F01	Cable/Interconnect: Configuration Error cleared	Recovered from the Configuration error.
OS	Others	[PET] 0x00206F00	OS Stop/Shutdown: Critical stop during OS load / Initialization	Stopped during OS initialization.
		[PET] 0x00206F01	OS Stop/Shutdown: Run-time Critical Stop	Stopped while OS is running.
Slot/Connector	Others	[PET] 0x00216F00	Slot/Connector: Fault Status asserted	The slot became abnormal.
		[PET] 0x80216F00	Slot/Connector: Fault Status negated	Recovered from slot failure.
		[PET] 0x00216F02	Slot/Connector: Slot/Connector Device Installed	The slot is implemented.
		[PET] 0x80216F02	Slot/Connector: Slot/Connector Device Removed	The slot was removed.
		[PET] 0x00216F05	Slot/Connector: Slot Power is OFF	The slot is powered OFF.
		[PET] 0x80216F05	Slot/Connector: Slot Power is ON	The slot is powered ON.
		[PET] 0x00216F07	Slot/Connector: Interlock asserted	Interlock occurred.
		[PET] 0x80216F07	Slot/Connector: Interlock negated	Recovered from Interlock.
		[PET] 0x00216F08	Slot/Connector: Slot is Disabled	The slot is disabled.
		[PET] 0x80216F08	Slot/Connector: Slot is Enabled	The slot is enabled.
ACPI Power State	Others	[PET] 0x00226F00	System ACPI Power State: S0/G0 Working	System ACPI Power State: S0/G0 Working System ACPI Power State: S5/G2 Soft off
		[PET] 0x00226F05	System ACPI Power State: S5/G2 Soft off	System ACPI Power State: S5/G2 Soft off
		[PET] 0x00226F07	System ACPI Power State: G3 Mechanical Off	System ACPI Power State: G3 Mechanical Off
		[PET] 0x00226F09	System ACPI Power State: G1 Sleeping	System ACPI Power State: G1 Sleeping
Watchdog Timer	Others	[PET] 0x00236F00	Watchdog Timer: Timer expired, status only (no action, no interrupt)	Watchdog Timer was not updated within a time frame. (No Action is configured.)
		[PET] 0x80236F00	Watchdog Timer: Recover from Timer expired only	Recovered from time-out.
		[PET] 0x00236F01	Watchdog Timer: Hard Reset	Executed Hard reset by Watchdog Timer.

Classification	Event Category	Event ID	Message	Description
		[PET] 0x80236F01	Watchdog Timer: Recover from Hard Reset	Recovered from Hard reset by Watchdog Timer.
		[PET] 0x00236F02	Watchdog Timer: Power Down	Executed Power OFF by Watchdog Timer.
		[PET] 0x80236F02	Watchdog Timer: Recover from Power Down	Recovered from Power OFF by Watchdog Timer.
		[PET] 0x00236F03	Watchdog Timer: Power Cycle	Executed Power Cycle by Watchdog Timer.
		[PET] 0x80236F03	Watchdog Timer: Recover from Power Cycle	Recovered from Power Cycle by Watchdog Timer.
		[PET] 0x00236F08	Watchdog Timer: Timer interrupt	Timer interrupt occurred.
Device	Others	[PET] 0x00256F00	Entity Presence Information: Entity Present	The device is implemented.
		[PET] 0x00256F01	Entity Presence Information: Entity Absent	The device is empty.
		[PET] 0x00256F02	Entity Presence Information: Entity Disabled	The device is disabled.
		[PET] 0x80256F02	Entity Presence Information: Entity Enabled	The device is enabled.
ASIC/IC	Others	[PET] 0x00260301	Monitor ASIC/IC: Monitoring event occurred	An event occurred on ASIC/IC.
		[PET] 0x80260301	Monitor ASIC/IC: Monitoring event cleared	Recovered from an event on ASIC/IC.
LAN	Others	[PET] 0x00270301	LAN: Monitoring event occurred	An event occurred on LAN.
		[PET] 0x80270301	LAN: Monitoring event cleared	Recovered from a LAN event.
Management Subsystem	Others	[PET] 0x00286F03	Management Subsystem Health: Management Controller unavailable	BMC is unavailable.
Battery	Others	[PET] 0x00296F00	Battery: Battery Low	Voltage of the battery decreases.
		[PET] 0x80296F00	Battery: Recover from Battery Low	Voltage recovered.
		[PET] 0x00296F01	Battery: Battery Failed	The battery failed.
		[PET] 0x80296F01	Battery: Recover from Battery Failed	Recovered from the battery failure.
		[PET] 0x00296F02	Battery: Battery detected	Detected a battery.

Classification	Event Category	Event ID	Message	Description
		[PET] 0x80296F02	Battery: No Battery	Battery not found.

Note: SigmaSystemCenter handles PET as an OOB Management event. PET is a type of SNMP Trap.

Even if SigmaSystemCenter receives an OOB Management event corresponding to SNMP Trap, SigmaSystemCenter does not display the event on the Web Console in some cases because such events are filtered by SigmaSystemCenter internally.

The following table shows the conditions for discarding SNMP Trap.

#	Case of discarding SNMP Trap
1	SigmaSystemCenter discards SNMP Trap except PET. SNMP Trap has a value called "Enterprise". The "Enterprise" of PET is "1.3.6.1.4.1.3183.1.1".
2	SigmaSystemCenter discards PET retransmitted. It happens that the BMC retransmit PET to SigmaSystemCenter. In this case, SigmaSystemCenter checks the value of PET called "Sequence Number". If the sequence number of PET is equal to the previous, SigmaSystemCenter discards the latter.
4	SigmaSystemCenter discards PET from a machine managed by ESMPRO.
5	SigmaSystemCenter discards PET from the sensor which SigmaSystemCenter has no information of.
6	SigmaSystemCenter discards PET from the machine whose account information is not set.
7	SigmaSystemCenter discards PET which seems to mean the same event as the previous one.
8	SigmaSystemCenter discards PET which doesn't exist on the list above.

1.2.9. Events the Hyper-V Cluster Function Can Detect

The events that the Hyper-V Cluster function can detect from Microsoft Failover Cluster are as follows.

You can check the following error events by specifying the category in the Event Category and "HyperVProvider" in the Report Source.

Event Category	Event ID	Message	Description
Cluster: Node down	Node[Down]	Hyper-V Cluster Node Down	A cluster node is down.
	Cluster[NotRunning]	Hyper-V Cluster Not Running	Connection to the cluster is lost.
Cluster: Node up	Node[Up] *4	Hyper-V Cluster Node Up	A cluster node is up.
	Cluster[Running]	Hyper-V Cluster Running	Connection to the cluster is re-established.

Event Category	Event ID	Message	Description
Machine inaccessible error	Resources(VM)[Failed]	Hyper-V Cluster VM Unavailable	A virtual machine is unavailable to the cluster.
	Resources(VM)[Offline] *1	Hyper-V Cluster VM Resource Offline	A virtual machine resource is offline.
Machine inaccessible error recovery	Resources(VM)[Online]	Hyper-V Cluster VM Resource Online	A virtual machine resource is online.
Hard disk recovery failure	CSV[Scarce] *2	Hyper-V Cluster CSV free space has dropped below the minimum threshold.	Free space of a CSV disk has dropped below the minimum threshold.
	CSV[Critical] *3	Hyper-V Cluster CSV free space has dropped below the critical threshold. VMs are in Paused-Critical state.	VMs are in Paused-Critical state because free space of a CSV disk has dropped below the critical threshold.
	CSV[Maintenance]	Hyper-V Cluster CSV Maintenance Status	CSV status is Maintenance
	CSV[NoAccess]	Hyper-V Cluster CSV No Access Status	CSV status is NoAccess
	CSV[NoDirectIO]	Hyper-V Cluster CSV No Direct IO Status	CSV status is NoDirectIO
	Resources(PhysicalDisk)[Failed]	Hyper-V Cluster Physical Disk Resource Failed	Disk resource failed.
	Resources(PhysicalDisk)[Offline]	Hyper-V Cluster Physical Disk Resource Offline	Disk resource is offline.
Recovery from the hard disk recovery failure	CSV[Abundant] *2	Hyper-V Cluster CSV free space has increased above the minimum threshold.	Free space of a CSV disk has increased above the minimum threshold.
	CSV[NonCritical] *3	Hyper-V Cluster CSV free space has increased above the critical threshold.	Free space of a CSV disk has increased above the critical threshold.
	CSV[NoFaults]	Hyper-V Cluster No Faults Status	CSV status is NoFaults
	Resources(PhysicalDisk)[Online]	Hyper-V Cluster Physical Disk Resource Online	Disk resource is online.
Cluster: Network failure	Network[Down]	Hyper-V Cluster Network Down	A network is down.
	Network[Partitioned]	Hyper-V Cluster Network Partitioned	A network is partitioned.

Event Category	Event ID	Message	Description
	Network[Unavailable]	Hyper-V Cluster Network Unavailable	A network is unavailable.
	NetworkInterface[Failed]	Hyper-V Cluster Network Interface Failed	A network interface failed.
	NetworkInterface[Unavailable]	Hyper-V Cluster Network Interface Unavailable	A network interface is unavailable.
	NetworkInterface[Unreachable]	Hyper-V Cluster Network Interface Unreachable	A network interface is unreachable.
Cluster: Network recovery	Network[Up]	Hyper-V Cluster Network Up	A network is up.
	NetworkInterface[Up]	Hyper-V Cluster Network Interface Up	A network interface is up.

*1 Disabled by default. To enable this event, modify the registry:
Key: HKEY_LOCAL_MACHINE\SOFTWARE\NEC\PVM\Provider\VM\HyperV\
Value (Type): EnableVMOffEvent (REG_DWORD)
Value: 1
To disable it, change the value from 1 to 0.

*2 To change the thresholds of disk free space and disk usage rate, modify the registry:
Key: HKEY_LOCAL_MACHINE\SOFTWARE\NEC\PVM\Provider\VM\HyperV\
・Disk free space
Value (Type): FreeSpaceThreshold (REG_DWORD)
Default Value: 2048 (MB)
・Disk usage rate
Value (Type): DiskUsageThreshold (REG_DWORD)
Default Value: 75 (%)

*3 Virtual machines go into the Paused-Critical state if the free space of CSV falls below 200MB. CSV[Critical] event is notified when a virtual machine is in the Paused-Critical state.
CSV[NonCritical] event is notified when the capacity monitoring detects the free space of CSV exceeds 200MB, which does not automatically recover virtual machines from its Paused-Critical state. Those virtual machines need to be manually started after verifying that there is sufficient free space.

*4 Cluster: Node recovery events do not occur in all recovery case. Events might not occur depending on the recovery way.

1.3. Policy Setting

Policy settings are created based on standard policies prepared for each machine type and usage. You can assign different policy settings to each group and model.

SigmaSystemCenter specifies a managed machine or a group (model) by using a notified event that is sent when any status change happens, and checks the policy setting assigned to the group (model). If any action against the status change event is set in the policy setting, SigmaSystemCenter executes the action.

1.4. Configuring Actions

Normally, you set an action to each single event; however, you can also set an action to multiple events collectively if you want to execute the same action to all events in the same event category. In addition, you can specify multiple actions to execute and also conditions to execute an action.

If you do not set any action to an event, SigmaSystemCenter does not execute any action but outputs the operations log for the event. Even if you set any action to an event, SigmaSystemCenter does not execute any action in a situation when the suppression conditions of the action are satisfied.

1.4.1. Flow Control of Multiple Actions

The number of actions settable to an event is 30 at the maximum. If you specify multiple actions, SigmaSystemCenter executes the actions in the order registered in the setting window (from top to bottom).

From the second action or later, the result of **the target action** can be specified as an execution condition for the next action.

The target action, the above mentioned, is defined as follows:

If any value is NOT set for the Label of an action, the target action is the one registered just above the action of which the Label is not set.

If any value is set for the Label of an action, the target action is the one registered in the number indicated in the Label.

According to the result of the target action, the execution condition can be specified as follows:

- Success

  Executes the next action if the target action ends normally.

  If the target action is not executed or the target action ends with an error, the next action is not executed.
- Completed

  Executes the next action when the target action is completed.

  If the target action is not executed, the next action is not executed.
- Failed

  Executes the next action if the target action ends abnormally.

  If the target action is not executed or the target action ends normally, the next action is not executed.

If you cancel the execution of an action while the action is being executed, the execution process is aborted and the job ends with an error. In this case, the following actions are not executed and end no matter what execution results are set.

The execution result of all actions is displayed as completed only when all the actions are completed. If even one action ends with an error, the result of all actions is ending with an error. However, if *Reset of an action execution result* is executed after the action ended with an error and also all the following actions are completed, the result of all actions is displayed as completed.

Note: There is an exception to the following actions:

・Machine status / Set faulted status by sensor diagnosis

・Machine status / Set ready status by Total recover diagnosis

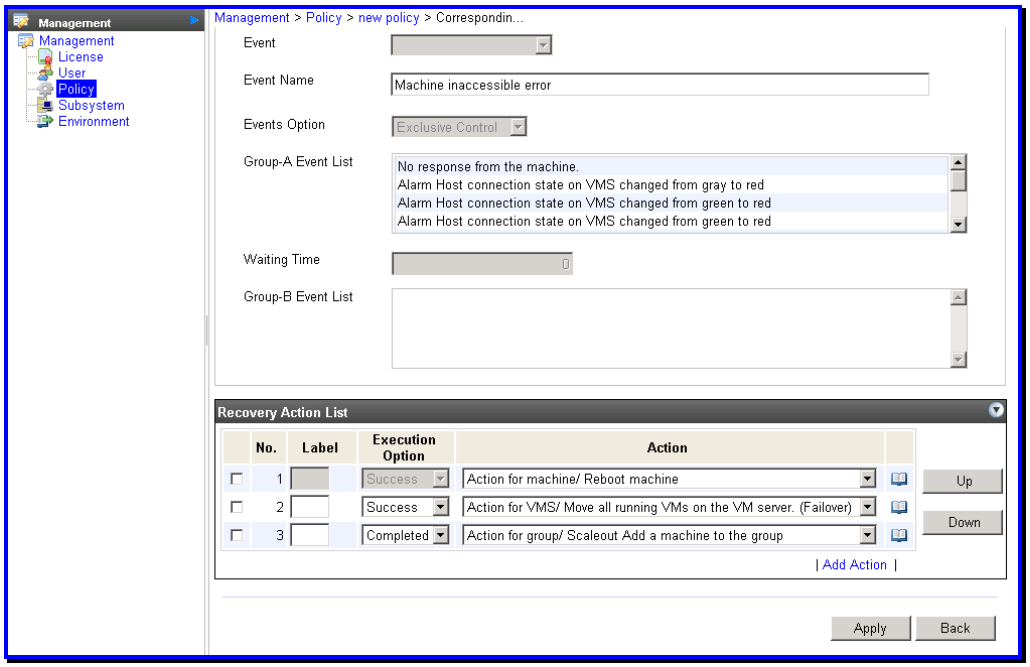
・Machine status / Set ready status by HardwarePartsStatus diagnosis

Execution results of them are always displayed as "completed" even if they end with an error.

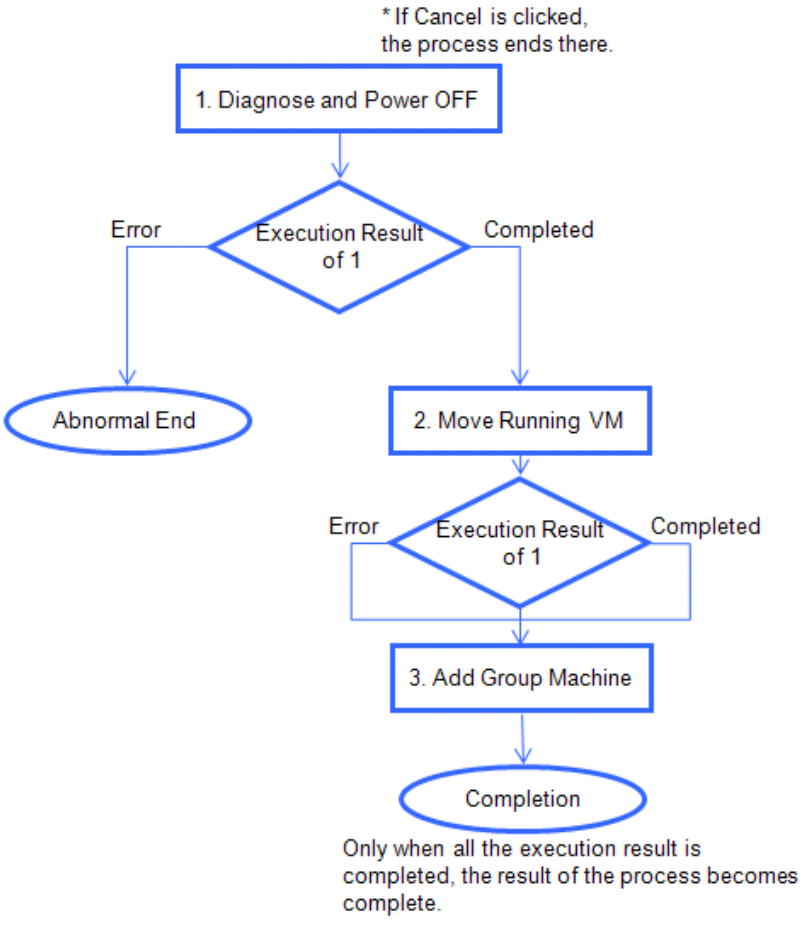
[Example1]

This is an example of configuring the corresponding event handler settings against a Machine inaccessible error which has been occurred on a virtual machine server.

- Type of the managed target: virtual machine server
- Occurred event: Machine inaccessible error
- Details of the corresponding event handler settings. What is surrounded by round blackets is the execution condition.
    1. Diagnose and Power OFF
    2. Move all running VMs on the VM server (,which is executed when the number 1 event handler setting ends successfully.)
    3. Scaleout Add a machine to the group (,which is executed when the number 2 event handler setting ends.)



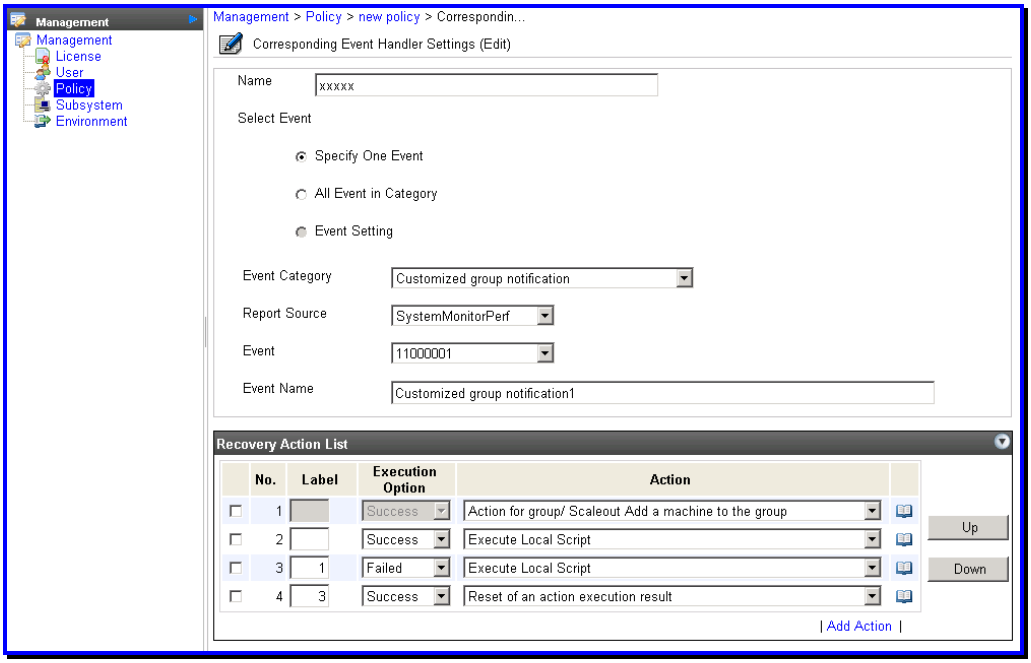
In this case, SigmaSystemCenter executes the event handler settings as follows:


* If Cancel is clicked, the process ends there.
1. Diagnose and Power OFF
Execution Result of 1
Error
Completed
Abnormal End
2. Move Running VM
Execution Result of 1
Error
Completed
3. Add Group Machine
Completion
Only when all the execution result is completed, the result of the process becomes complete.

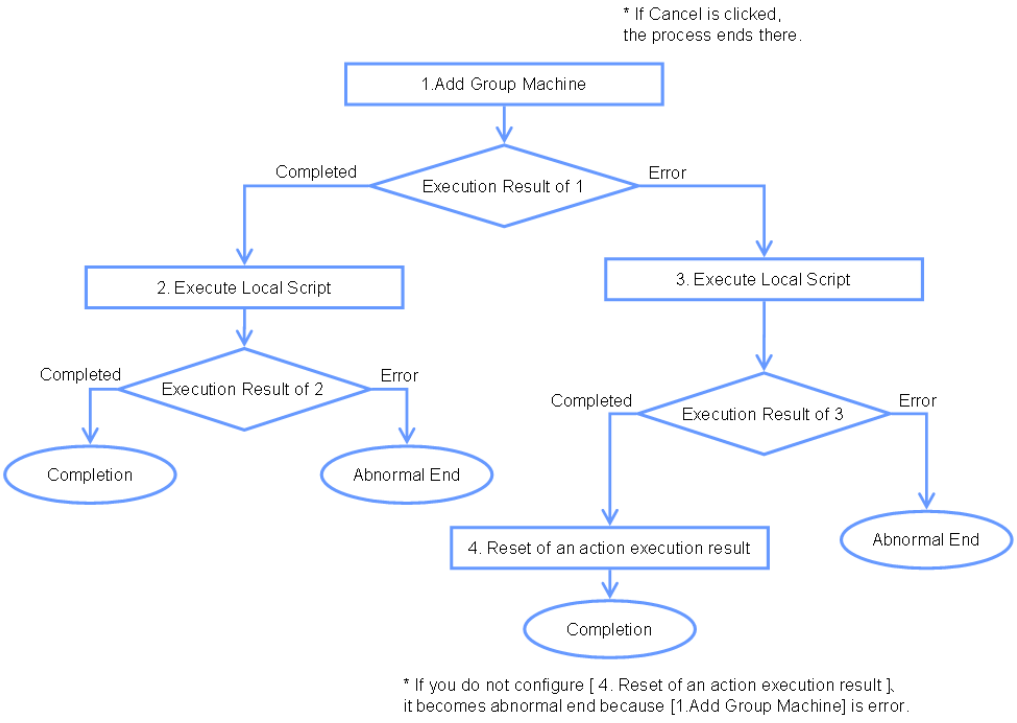
[Example2]

Assume that there is an environment where System Monitor - Performance Monitoring Services monitors the load status of a group. If the load exceeds the threshold, SigmaSystemCenter executes Scale Out. This is an example of switching the scripts to notify the user depending on the execution result of the Scale Out.

- Type of the managed target: group
- Occurred event: group custom report by System Monitor - Performance Monitoring Services
- Details of the corresponding event handler settings. What is surrounded by round blackets is the execution condition.
    1. Scaleout Add a machine to the group
    2. Execute Local Script *Notification of Success (If the number 1 event handler setting ends successfully)
    3. Execute Local Script *Notification of Failed (If the number 1 event handler setting fails)
    4. Reset of an action execution result (If the number 3 event handler setting ends successfully)



In this case, SigmaSystemCenter executes the event handler settings as follows:



1.4.2. Suppression of Action Execution (Suppression of Error Event)

As for a part of error events, such as Machine inaccessible error, even if SigmaSystemCenter detects the error event, SigmaSystemCenter waits for a recovery event for the error event generated for a certain period of time and only if the recovery event does not occur, SigmaSystemCenter executes a set action, supposing that an error event and recovery event occur continuously in a short period of time.

The followings are the events to which you can set suppression setting and their suppression events.

Events	Suppression Events	Monitoring time of a suppression event (Default Value)
CPU load failure	CPU load failure recovery	180 seconds
Machine inaccessible error	start up machine	180 seconds
Shortage of Memory	Shortage of Memory recovery	60 seconds

Reference: For instructions on how to set suppression events, see Subsection 4.10.5, "Configuring Policy Property Settings" in *SigmaSystemCenter Configuration Guide*.

1.4.3. Grouping Multiple Events

You can select either a single event or all events in the same event category for an event that corresponds to an action to execute.

If you select all events, set actions are executed when any of events that are set to the same event category.

Note that you cannot set multiple corresponding event handler settings for the same event.

1.5. About Diagnosis

1.5.1. Diagnosis Function

SigmaSystemCenter's diagnosis function enables detailed diagnosis of a failed environment where the Machine inaccessible error occurred. By setting a policy action of the diagnosis function, you can set recovery process to be executed only if the recovery setting is required.

A policy action of the diagnosis function, Diagnose and Power OFF, ends with an error if the recovery process cannot be executed because the error has an influence on a whole group or if an error machine is judged normal. If the diagnosis function judges that there is a possibility for the recovery process to succeed, the function aborts the managed machine and completes the process. Ensure to set Success to the execution condition of recovery action after executing the Diagnose and Power OFF action.

Note: The root password must be set for ESX. If not, verification of connection will fail. The root password can be set from the Virtual Resource tab or the Subsystem Edit window. The Virtual Resource tab appears by clicking the Environment icon on the Management view. The Subsystem Edit window appears by clicking the Subsystem icon on the Management view.

For further information on how to set the root password, see Subsection 2.4.6, "Configuring the Root Password of a Virtual Machine Server" in *SigmaSystemCenter Configuration Guide*.

The diagnosis function can be used only when a managed machine is a virtual machine server (VMware, XenServer). If the Diagnose and Power OFF action is executed on a managed machine other than virtual machine servers (VMware, XenServer), Diagnosis will not be executed but Shutdown or Power OFF will be executed. For the details of the policy action, see Subsection 1.7.15, "Action for machine / Diagnose and Power OFF".

The diagnosis function checks the following points:

- If the function can connect to VMware vCenter Server or Pool Master of XenServer that manages an error machine
- If there are two or more managed machines that raises Faulted as their Hardware Status in a group to which the error machine belongs
- If the function connects to an (host) OS of managed machines
  (The function checks this point on up to five machines in the same group as the error machine other than the error machine.)
- If a managed machine can access to the shared disk in use
  (A managed machine checks this point on up to five machines in the same group as the error machine other than the error machine.)

In addition, when checking connection to an OS or access to the shared disk, if a fault is found on the error machine in diagnosis, the diagnosis function diagnoses other machines; however, it targets managed machines that meet the following conditions. For managed machines other than the targets, the diagnosis function does not count on as the number of machines in a group.

- Managed in the same operation group with the error machine
- The Running Status is On
- The Maintenance Status is not On
- The Policy Status is On
- The Power Status is On or -

The details of abnormal end of the Diagnose and Power OFF action are as shown in the following table:

Type of failed machine	**Conditions to cause abnormal end of diagnosis** **(In the checking order)**	**Notes**
ESX Server	・A SigmaSystemCenter management server cannot connect to VMware vCenter Server. ・Connection to an error machine ends with an authority error or is disconnected on vCenter Server. ・There are two or more failed machines in one group (other than the error machine). ・When the number of machines that cannot connect to an OS of machines in the same group (including the error machine). - When there are two to four machines in the group: two or more - When there are five or more machines in the group: three or more ・When the number of machines that cannot connect to the shared disk in the same group (including the error machine) - When there are two to four machines in the group: two or more - When there are five or more machines in the group: three or more ・If an error machine is normal.	・When a SigmaSystemCenter management server cannot connect to vCenter Server, the Job ends with an error because the diagnosis function cannot control the recovery process. ・When there are many machines that cannot connect to an OS or access to the disk, the diagnosis function judges the circumstances that it should not execute the recovery process and ends the process with an error.

Type of failed machine	Conditions to cause abnormal end of diagnosis (In the checking order)	Notes
ESXi Standalone	・If connection to an error machine ends with an authority error or is disconnected in SSC. ・There are two or more failed machines in one group (other than the error machine). ・When the number of machines that cannot connect to an OS of machines in the same group (including the error machine) - When there are two to four machines in the group: two or more - When there are five or more machines in the group: three or more ・When the number of machines that cannot connect to the shared disk in the same group (including the error machine) - When there are two to four machines in the group: two or more - When there are five or more machines in the group: three or more ・If an error machine is normal.	・When there are many machines that cannot connect to an OS or access to the disk, the diagnosis function judges the circumstances that it should not execute the recovery process and ends the process with an error.
XenServer Pool Master Machine	・If an error machine is normal.	・If connection to Pool Master or access to the disk failed, the diagnosis function cannot check the status of Slave machines in Pool Master because the diagnosis function checks Slave machines in Pool Master through the Pool Master. In this case, the diagnosis function cannot judge if it can recover the circumstances; however, it completes the process because there is a possibility of recovery.

Type of failed machine	Conditions to cause abnormal end of diagnosis (In the checking order)	Notes
XenServer Slave Machine	・Cannot connect to XenServer Pool Master. ・Cannot access to the shared disk through XenServer Pool Master.	・When a machine cannot connect to Pool Master or access to the disk, the process ends with an error because the diagnosis function cannot control the recovery process. ・Because the shared disk's check to a Slave machine is executed through Pool Master, if the diagnosis function can access to the shared disk, a Slave machine can connect to the shared disk or not. In this case, the diagnosis function shows preference on the assumption of error occurrence and completes the process to execute the recovery process.

1.5.2. Sensor Diagnosis

Sensor diagnosis receives events of managed machines and analyzes whether the sensor statuses of the powered on managed machines have any trouble.

Sensor diagnosis needs communicating with BMC of managed machines through OOB Management.

"*Machine status / Set faulted status by sensor diagnosis"* policy action ends abnormally when it judges that the machine suspected of failure is normal.

And the rules of diagnosis of machines changes depending on the type of triggered event or machine status.

The diagnosis rules change as follows according to the type of triggered event.

- The OOB Management event

  Analyzes the sensor which has sent the triggered event alone and judges whether the sensor is in critical state or not.

  If the sensor does not respond due to communication failure or hardware failure, sensor diagnosis decides whether it ends normally or abnormally according to the importance of the triggered event.

- NEC ESMPRO event

  One of NEC ESMPRO events is relevant to the sensor status and treated as to be diagnosed.

Receiving the NEC ESMPRO event relevant to the sensor status, sensor diagnosis analyzes the statuses of sensors whose types are the same as the sensor which has sent the triggered event. If any sensor does not respond due to communication failure or hardware failure, sensor diagnosis decides whether it ends normally or abnormally according to the importance of the triggered event.

The target NEC ESMPRO event is as follows:

Target event	Source
SystemMonitorEvent	ESMCOMMONSERVICE
	ESMLOCALPOLLING

Sensor diagnosis skips diagnosing for NEC ESMPRO events other than the above.

- Other events

  For events other than the OOB Management events and the NEC ESMPRO event, sensor diagnosis does not execute diagnosis but set faulted status, and ends normally. If the sensor which has sent the event does not respond due to communication failure or hardware failure, sensor diagnosis set faulted status on the sensor.

There are cases where sensor diagnosis cannot obtain the sensor status properly because of the machine power status. In this case the sensor diagnosis returns the result as follows according to the machine power status.

- When the machine power status changes while sensor diagnosis is running

  This case may occur if the machine is automatically shut down or rebooted by HW failure. In this case, sensor diagnosis judges that the machine has HW failure and sets faulted status, and ends normally.

- When the machine power status is already off before the sensor diagnosis runs

  The machine power may have been turned off before sensor diagnosis runs because the machine had been in critical or non-recoverable state. In this case, sensor diagnosis judges that the machine has HW failure and sets faulted status, and ends normally.

Note:

・Sensor diagnosis targets the power-on machine where HW failure occurred. Therefore, you cannot obtain an accurate result if you execute sensor diagnosis for the power-off machine.

・When you executes sensor diagnosis for the machine which the OOB Management is not enabled, sensor diagnosis sets faulted status and ends normally.

・The criteria of severity of sensor status are independent from event categories. Therefore, sensor diagnosis may judge the machine is normal even when "*Machine status / Set faulted status by sensor diagnosis"* policy action is set for the events classified into failure category.

The following table shows the relationship among the type of triggered event, the connection status and the machine status when the triggered event happens, and the result of action in detail.

If the machine power is on before and after executing sensor diagnosis

The type of the triggered event	**Connection and machine status**	**result of action**
OobManagement event and the target ESMPRO event to be diagnosed	The sensor, which sent a predictive event, is in critical state.	This action sets faulted status and ends normally.
	The sensor, which sent a predictive event, is in warning or normal state.	There is no failure, and this action does not set faulted state and ends abnormally.
	This action cannot get information of the sensor which sent a predictive event.	This action ends in a status depends on the event severity. If the severity of event is critical, this action sets faulted status and ends normally.
	・This action could not communicate with BMC. ・This action failed to execute IPMI command to BMC. ・An unexpected error occurred.	This action ends in a status depends on the event severity. If the severity of event is critical, this action sets faulted status and ends normally.
Other events	Do not depend on connection and machine status.	This action sets faulted status and ends normally.

The following table shows the relationship between power status of the machine and result of action.

These situations have a priority over the above sensor diagnosis results.

Power status	result of action
The power status changes before and after sensor diagnosis.	This action sets faulted status and ends normally.
The power status is off before the sensor diagnosis.	This action sets faulted status and ends normally.

Sensor diagnosis called from Total recover diagnosis explained in Subsection 1.5.4, "Total Recover Diagnosis" analyses all the sensors of a target managed machine regardless of triggered events, and judges the target managed machine is Normal only when all the sensors are normal. For a target machine with any sensor is not Normal, sensor diagnosis judges the target machine is Abnormal and ends abnormally.

When sensor diagnosis cannot obtain sensor status due to power status of a target machine, the sensor diagnosis also judges the target machine is Abnormal and ends abnormally.

Set ready status by Total recover diagnosis, a policy action of diagnosis function, sets Normal for the hardware status of the target machine and ends normally if the target machine is judged to be in normal status.

1.5.3. Hardware Parts Status Diagnosis

Hardware Parts Status diagnosis diagnoses the status of a target machine based on the hardware parts statuses configured according to which event happens.

SigmaSystemCenter checks the hardware parts statuses created or updated based on the events notified from related products or related functions. When all the hardware parts statuses are normal, SigmaSystemCenter judges the target machine is in normal status.

"Machine status / Set ready status by HardwarePartsStatus diagnosis", policy action of diagnosis function, sets Normal for the hardware status of the target machine and ends normally if the target machine is judged to be in normal status. If the target machine is judged to be not in normal status, it ends abnormally.

Related products and related functions offers events relevant to the hardware parts statuses are as follows:

Related Products / Related Functionalities	Hardware Parts Status Name
NEC ESMPRO	Battery / Boot Error / Button/Switch / Cable/Interconnect / Chassis / Chip Set / ClusterLan / ClusterNode / Cooling Device / CpuDegeneracy / CpuLoad / Critical Interrupt / DeadOrAlive / Disk / DiskRecovery / DiskReplace / Drive Slot(Bay) / Entity Presence Information / Event Logging / Fan(Speed) / Management Subsystem Health / Memory / MemoryDegeneration / Module/Board(Missing) / OS Boot / OS Critical Stop / Physical Security(Chassis Intrusion) / POST Error / POST Memory Resize / Power Supply / Power Unit / Processor / Slot/Connector / System ACPI Power State / System Event / Temperature / Voltage / Watchdog1
Out-of-Band Management (Sensor)	Battery / Button/Switch / Cable/Interconnect / Chassis / Chip Set / Cooling Device / Critical Interrupt / Drive Slot(Bay)/ Entity Presence Information / Event Logging / Fan(Speed) / LAN / Management Subsystem Health / Memory / Module/Board(Missing) / Monitor ASIC/IC / OS Critical Stop / Physical Security(Chassis Intrusion) / Platform Security Violation Attempt / POST Error / POST Memory Resize / Power Supply / Power Unit / Processor / Slot/Connector / System ACPI Power State / System Event / Temperature / Voltage / Watchdog1 / Other Units-based Sensor / Other FRU / Watchdog Timer / Microcontroller/Coprocessor / Add-in Card / Terminator / System Boot Initiated / Platform Alert / Session Audit / Version Change / FRU State / OEM
Hyper-V	NetworkInterface / Node / Resources (VM) / OSStatus / DiskAccess
VMware (ESX, ESXi)	Connection State / Cpu Usage / Heartbeat State / Memory Usage / Network Connectivity / Power State / Storage Path Connectivity / OSStatus / DiskAccess
Citrix XenServer	OSStatus / DiskAccess
Alive Monitoring	AliveMonitoringState / PingState / PortConnectivity

Hardware parts statuses of NEC ESMPRO and Out-of-Band Management do not recover automatically because SigmaSystemCenter cannot realize the target machine is in normal status unless the sensor diagnosis is executed.

Therefore, enable Out-of-Band Management to use Total recover diagnosis, execute Composite Diagnosis in the Web Console, or execute Reset(Ready) manually.

As for the following hardware parts statuses, they do not recover to Normal automatically. Check that the target machine has no abnormalities, and execute Reset(Ready) manually.

Hardware Parts Status Name	Status	Corresponding Event
ClusterLan	Faulted	[Source]CLUSTERPRO [ID]0xC0005217(21015) [Summary]Public LAN error [Source]CLUSTERPRO [ID]0xC000521B(21019) [Summary]Public LAN error [Source]CLUSTERPRO [ID]0xC000521C(21020) [Summary]Public LAN error [Source]CLUSTERPRO [ID]0xC000521D(21021)

Hardware Parts Status Name	Status	Corresponding Event
		[Summary]Public LAN error
ClusterNode	Faulted	[Source]CLUSTERPRO [ID]0xC00008A4(2212) [Summary]Server down [Source]CLUSTERPRO X [ID]0x40000002(2) [Summary]Server down [Source]EXPRESSCLUSTER X [ID]0x40000002(2) [Summary]Server down
CpuDegeneracy	Faulted	[Source]ESMCommonService [ID]0xC0000838(2104) [Summary]CPU Module FRB
	Degraded	[Source]ESMCommonService [ID]0x800002BD(701) [Summary]CPU Reduce [Source]ESMCommonService [ID]0x800002BF(703) [Summary]CPU Reduce
DiskRecovery	Degraded	[Source]ASMBENotify [ID]0x0000200C(8204) [Summary]Member is down on array [Source]ASMBENotify [ID]0x0000200D(8205) [Summary]Member is missing on array [Source]ASMBENotify [ID]0x0000200E(8206) [Summary]Array is off-line; member failed [Source]ASMBENotify [ID]0x00002023(8227) [Summary]Array is critical [Source]ASMBENotify [ID]0x0000205C(8284) [Summary]Array is still critical [Source]ASMBENotify [ID]0x0000B00E(45070) [Summary]Device is failed [Source]ASMBENotify [ID]0x0000B033(45107) [Summary]Array is degraded [Source]ASMBENotify [ID]0x0000B034(45108) [Summary]Second-level array is degraded [Source]ASMBENotify [ID]0x0000B036(45110) [Summary]Array is degraded [Source]ASMBENotify [ID]0x0000B037(45111) [Summary]Second-level array is degraded [Source]ESMMylexService [ID]0x800403E9(1001) [Summary]Not Support [Source]ESMAMIService [ID]0x800403E9(1001) [Summary]Not Support [Source]ESMDiskArray [ID]0x800403E9(1001) [Summary]Disk Array Logical Device Critical [Source]ESM Mylex Service [ID]0x80040205(517) [Summary]System Drive CRITICAL
DiskReplace	Faulted	[Source]ASMBENotify [ID]0x00002014(8212) [Summary]Reconstruct aborted due to I/O error [Source]ASMBENotify [ID]0x00002017(8215) [Summary]Verify aborted due to I/O error, no miscompares [Source]ASMBENotify [ID]0x00002019(8217) [Summary]Initialize aborted due to I/O error [Source]ASMBENotify [ID]0x0000202D(8237) [Summary]Reconstruct failed to start due to I/O error [Source]ASMBENotify [ID]0x00002035(8245) [Summary]Update of array drives failed after Initialize [Source]ASMBENotify [ID]0x00002038(8248) [Summary]Scheduled Reconstruct failed to start

Hardware Parts Status Name	Status	Corresponding Event
		[Source]ASMBENotify [ID]0x00002039(8249) [Summary]Scheduled Verify failed to start [Source]ASMBENotify [ID]0x0000204E(8270) [Summary]Verify utility failed to start [Source]ASMBENotify [ID]0x00002059(8281) [Summary]Dedicated spare not functional [Source]ASMBENotify [ID]0x00002085(8325) [Summary]Verify aborted due to I/O error with fixed miscompares [Source]ASMBENotify [ID]0x00002090(8336) [Summary]Recovered error: SMART event received for array [Source]ASMBENotify [ID]0x00002091(8337) [Summary]Recovered error: SMART event received for device [Source]ASMBENotify [ID]0x00002094(8340) [Summary]I/O error aborted Verify, unfixed miscompares [Source]ASMBENotify [ID]0x000020AD(8365) [Summary]Device is down. A Hard Drive is down or no longer responding. [Source]ASMBENotify [ID]0x0000B069(45161) [Summary]Array is dead [Source]ASMBENotify [ID]0x0000B090(45200) [Summary]Non-corrected ECC error found [Source]ASMBENotify [ID]0x0000B11E(45342) [Summary]Channel offline [Source]ASMBENotify [ID]0x0000B11F(45343) [Summary]Channel offline [Source]ASMBENotify [ID]0x0000B121(45345) [Summary]Channel offline [Source]ASMBENotify [ID]0x0000B122(45346) [Summary]Channel offline [Source]ASMBENotify [ID]0x0000B123(45347) [Summary]Channel offline [Source]ESMMylexService [ID]0xC00403EB(1003) [Summary]Not Support [Source]ESMMylexService [ID]0x800403F0(1008) [Summary]Not Support [Source]ESMAMIService [ID]0xC00403ED(1005) [Summary]Not Support [Source]ESMAMIService [ID]0x800403F3(1011) [Summary]Not Support [Source]ESMDiskArray [ID]0xC00403F3(1011) [Summary]Disk Array Physical Device Dead [Source]ESMDiskArray [ID]0x800403FC(1020) [Summary]Disk Array Physical Device S.M.A.R.T. Error [Source]ESMStorageService [ID]0x800403E8(1000) [Summary]Hard Disk Failure Prediction:Exceed Threshold [Source]ESMStorageService [ID]0x800403E9(1001) [Summary]Hard Disk Failure Prediction:S.M.A.R.T. Error [Source]ESM Mylex Service [ID]0xC0040200(512) [Summary]Physical Device DEAD [Source]ESM Storage Service [ID]0xC00423F6(9206) [Summary]HD:Fatal Recovered Error [Source]ESM Storage Service [ID]0x800423F5(9205) [Summary]HD:Warning Recovered Error

Hardware Parts Status Name	Status	Corresponding Event
		[Source]ESM Storage Service [ID]0xC00423F8(9208) [Summary]HD:Fatal Not Ready Error [Source]ESM Storage Service [ID]0x800423F7(9207) [Summary]HD:Warning Not Ready Error [Source]ESM Storage Service [ID]0xC00423FA(9210) [Summary]HD:Fatal Medium Error [Source]ESM Storage Service [ID]0x800423F9(9209) [Summary]HD:Warning Medium Error [Source]ESM Storage Service [ID]0xC00423FC(9212) [Summary]HD:Fatal Hardware Error [Source]ESM Storage Service [ID]0x800423FB(9211) [Summary]HD:Warning Hardware Error
MemoryDegeneration	Faulted	[Source]ESMCommonService [ID]0x800002BE(702) [Summary]Memory Reduce [Source]ESMCommonService [ID]0x800002C6(710) [Summary]Memory Reduce [Source]ESMCommonService [ID]0x8000051A(1306) [Summary]POST cache Reduce [Source]ESMCommonService [ID]0xC000051C(1308) [Summary]Cache ECC multi
network connectivity	Faulted	Network connectivity on VMS is lost
	Degraded	Network redundancy on VMS is lost Network redundancy on VMS is degraded
storage path connectivity	Faulted	Storage path connectivity on VMS is lost
	Degraded	Storage path redundancy on VMS is lost Storage path redundancy on VMS is degraded

1.5.4. Total Recover Diagnosis

Total recover diagnosis diagnoses a target machine based on all the results of diagnosis, sensor diagnosis, and hardware parts status diagnosis.

Total recover diagnosis varies its combination of diagnoses depending on types and settings of target machines.

Target machines and diagnoses for the target machines are as follows:

Target Machine	Diagnosis for the Target Machine
Virtual machine server	Executes Subsection 1.5.1, "Diagnosis Function." Checks the following three points: ▪ Whether the target machine can connect to its virtual infrastructure, such as VMware vCenter Server or XenServer PoolMaster. ▪ Whether the host OS of the target machine is connectable ▪ Whether the shared disk used by the target machine is accessible * Does not check whether the target machine group has two or more units of managed machines whose hardware status are Faulted.
A machine on which Out-of-Band Management function is being used	Executes Subsection 1.5.2, "Sensor Diagnosis."
All machines	Executes Subsection 1.5.3, "Hardware Parts Status Diagnosis."

"Machine status / Set ready status by Total recover diagnosis", policy action of diagnosis function, sets Normal for the hardware status of the target machine and ends normally if the target machine is judged to be in normal status. If the target machine is judged to be not in normal status, it ends abnormally.

Composite diagnosis in the Web Console uses Total recover diagnosis and set Normal for hardware statuses.

Note:

▪ When a target machine is a virtual machine server, XenServer slaves cannot recognize access to the shared disk from the target machine. When the number of target disks to diagnose is zero, other virtual machine servers (ESX, standalone ESXi, Xen, and Hyper-V) also cannot recognize the target disks are accessible or not. Therefore, SigmaSystemCenter cannot judge the target machine is Normal using Composite Diagnosis. In above cases, check that the target machine has no trouble, and execute Clear Failure Status manually.

▪ The following hardware parts statuses are not updated by executing Composite Diagnosis. To recover to Normal, check that the target machine has no abnormalities, and execute Reset(Ready) manually.

ClusterLan / ClusterNode / Connection State / Cpu Usage / CpuDegeneracy / CpuLoad / DeadOrAlive / Disk / DiskRecovery / DiskReplace / Heartbeat State / Memory Usage / MemoryDegeneration / Network Connectivity / NetworkInterface / Node / Power State / Resources(VM) / Storage Path Connectivity / AliveMonitoringState / PingState / PortConnectivity

▪ The following hardware parts statuses regarding VMware are recovered by total recover diagnosis if the corresponding statuses are recovered.

Cpu Usage / Memory Usage / Hertbeat State / Connection State

▪ If OOB Management is not enabled, the following hardware parts statuses are not updated by executing Composite Diagnosis. To recover to Normal, check that the target machine has no abnormalities, and execute Reset(Ready) manually.

Battery / Boot Error / Cable/Interconnect / Chassis / Chip Set / Cooling Device / Critical Interrupt / Drive Slot(Bay) / Fan(Speed) / LAN / Management Subsystem Health / Memory / Module/Board(Missing) / OS Critical Stop / Physical Security(Chassis Intrusion) / POST Error / POST Memory Resize / Power Supply / Power Unit / Processor / Slot/Connector / System Event / Temperature / Voltage

▪ If the power status of the target machine is OFF, sensor status may not be judged properly although OOB Management is enabled, then the hardware status cannot be recovered using Composite Diagnosis. In such a case, check that the target machine has no trouble, and execute Clear Failure Status manually.

1.6. About Standard Policy

You can use standard action settings to handle errors for each type or usage of managed machine as standard policies.

Contents of policy setting differ according to types of managed machine, such as a physical machine, virtual machine, and virtual machine server, or usage.

There are 11 kinds of Standard Policies:

Policy Name	Managed	Registered by Default
Standard Policy	Physical machines other than ones used as virtual machine servers	OK
Standard Policy (N+1)	Physical machines other than ones used as virtual machine servers * Corresponding to the N+1 replacing	-
Standard Policy (Virtual Machine)	Virtual Machine	OK
Standard Policy (VM Server)	Virtual Machine Server	OK
Standard Policy (VM Server Predictive)	Virtual Machine Server * Management that Predictive event monitoring is enabled	-
Standard Policy (VM Server Power save)	Virtual Machine Server * Corresponding to the power saving	-
Standard Policy (VM Server ESXi)	Virtual Machine Server (ESXi)	-
Standard Policy (VM Server Hyper-V)	Virtual Machine Server (Hyper-V)	-
Standard Policy (VM Server Hyper-V Predictive)	Virtual Machine Server (Hyper-V) * Management that Predictive event monitoring is enabled	-
Standard Policy (VM Server Hyper-V Power save)	Virtual Machine Server (Hyper-V) * Corresponding to the power saving	-
System Policy (Manager)	A manager that manages resources used by SigmaSystemCenter (e.g. vCenter Server).	OK

Standard policies that are registered by default are "OK" will be registered when applying the edition license.

The System Policy (Manager) is automatically applied to managers to monitor them, such as share resources. One System Policy (Manager) exists on one system. Configuring the System Policy on a group is unnecessary because it is not applied for managed machines.

Do not delete the System Policy (Manager) or do not change its name. If its name is changed, it will not be automatically applied because it is not recognized as the System Policy (Manager). If the System Policy (Manager) should be deleted by mistake or its name should be changed, it can be restored by restarting the PVMService. It cannot be added from the Add Policy menu.

When disabling the System Policy (Manager), disable the monitoring event setting.

Refer to the tables for each setting in the following subsections.

Note:

▪ If you select an event of a Standard Policy configured with multiple events on the Policy Property Setting window and open the Corresponding Event Handler Setting window of the event, the All event in category check box is selected automatically, and Others is displayed in the Event Category box. In addition, Component Events column is displayed below the Event Name box, on which a list of corresponding events is displayed.

▪ In an environment where SigmaSystemCenter is upgraded from an earlier version, Standard Policy may not correspond with the explanations in the following subsections because the Standard Policy remains the same as before. When a new policy is created in the environment, a Standard Policy that is configured as explained in the following subsections is created.

1.6.1. Settings of a Standard Policy

The following table shows the settings of a Standard Policy.

Event Name (Default)	**Report Source**	**Event**	**Event Handler Settings Name (Default)**	**Recovery Action**	**Event State**
CPU degeneracy failure	SystemMonitorEvent	All events in the *CPU degeneracy failure* event category	Set Degraded Status	Notification/ E-mail, Event Log Machine status / Set degraded status	Enable
CPU failure	SystemMonitorEvent	All events in the *CPU failure* event category and *CPU temperature failure* event category	Set Faulted Status	Notification/ E-mail, Event Log Machine status / Set faulted status	Enable

Event Name (Default)	**Report Source**	**Event**	**Event Handler Settings Name (Default)**	**Recovery Action**	**Event State**
CPU load failure	SystemMonitorEvent	All events in the *CPU load failure* event category and ESMCpuPerf[0x80000065] CPU Error Recovered ESMCpuPerf[0x80000069] CPU Error Recovered (* For compatibility from SigmaSystemCenter 1.3)	Set Faulted Status	Notification/ E-mail, Event Log	Enable
	VMwareProvider			Machine status / Set faulted status	
CPU load failure recovery	SystemMonitorEvent	ESMCpuPerf[0x40000067] CPU Warning Recovered ESMCpuPerf[0x4000006B] CPU Warning Recovered	Set Ready Status	Notification/ E-mail, Event Log	Enable
	VMwareProvider	All events in the *CPU load failure recovery* event category		Machine status / Set ready status	
disk replacement failure	SystemMonitorEvent	All events in the *Hard disk replacement failure* event category	Set degraded status	Notification/ E-mail, Event Log	Enable
				Machine status / Set degraded status	
Disk failure	SystemMonitorEvent	All events in the *Hard disk failure* event category	Set Faulted Status	Notification/ E-mail, Event Log	Enable
				Machine status / Set faulted status	
disk recovery failure	SystemMonitorEvent	All events in the *Hard disk recovery failure* event category	Set degraded status	Notification/ E-mail, Event Log	Enable
				Machine status / Set degraded status	
Recovery from the disk recovery failure	SystemMonitorEvent	All events in the *Recovery from the hard disk recovery failure* event category	Set Ready Status	Notification/ E-mail, Event Log	Enable
				Machine status / Set ready status	
machine down	SystemMonitorEvent	All events in the *Machine inaccessible error* event category	Set Faulted Status	Notification/ E-mail, Event Log	Enable
	VMwareProvider			Machine	

Event Name (Default)	Report Source	Event	Event Handler Settings Name (Default)	Recovery Action	Event State
	AliveMonitor			status / Set faulted status	
start up machine	SystemMonitorEvent	All events in the *Machine inaccessible error recovery* event category	Set Ready Status	Notification/ E-mail, Event Log	Enable
	VMwareProvider			Machine status / Set ready status	
	AliveMonitor				
Memory degeneration failure	SystemMonitorEvent	All events in the Memory degeneration failure event category	Set Degraded status	Notification/ E-mail, Event Log	Enable
	VMwareProvider	Alarm Virtual Machine Memory Usage on VM changed from green to red		Machine status / Set degraded status	
		Alarm Virtual Machine Memory Usage on VM changed from yellow to red			
		Alarm Virtual Machine Memory Usage on VM changed from gray to red			
Memory failure	SystemMonitorEvent	All events in the *Memory failure* event category	Set Faulted Status	Notification/ E-mail, Event Log	Enable
				Machine status / Set faulted status	
Cluster:Node has stopped	SystemMonitorEvent	CLUSTERPRO[0xC00008A4]	Set Faulted Status	Notification/ E-mail, Event Log	Enable
				Machine status / Set faulted status	
Cluster:Network failure	SystemMonitorEvent	CLUSTERPRO[0xC0005217]	Set Faulted Status	Notification/ E-mail, Event Log	Enable
				Machine status / Set faulted status	
custom group notification 1	SystemMonitorPerf	11000001	no action	no action	Disable
custom group notification 2	SystemMonitorPerf	11000002	no action	no action	Disable
custom group notification 3	SystemMonitorPerf	11000003	no action	no action	Disable
custom group notification 4	SystemMonitorPerf	11000004	no action	no action	Disable

Event Name (Default)	Report Source	Event	Event Handler Settings Name (Default)	Recovery Action	Event State
custom group notification 5	SystemMonitorPerf	11000005	no action	no action	Disable
custom machine notification 1	SystemMonitorPerf	10000001	no action	no action	Disable
custom machine notification 10	SystemMonitorPerf	1000000A	no action	no action	Disable
custom machine notification 2	SystemMonitorPerf	10000002	no action	no action	Disable
custom machine notification 3	SystemMonitorPerf	10000003	no action	no action	Disable
custom machine notification 4	SystemMonitorPerf	10000004	no action	no action	Disable
custom machine notification 5	SystemMonitorPerf	10000005	no action	no action	Disable
custom machine notification 6	SystemMonitorPerf	10000006	no action	no action	Disable
custom machine notification 7	SystemMonitorPerf	10000007	no action	no action	Disable
custom machine notification 8	SystemMonitorPerf	10000008	no action	no action	Disable
custom machine notification 9	SystemMonitorPerf	10000009	no action	no action	Disable

* You can set a suppression event for each of the machine down event and the CPU load failure event.

For instructions on how to set a suppression event, see Subsection 4.10.5, "Configuring Policy Property Settings" in *SigmaSystemCenter Configuration Guide*.

1.6.2. Settings of a Standard Policy (N+1)

The following table shows the settings of a Standard Policy (N+1).

Event Name (Default)	**Report Source**	**Event**	**Event Handler Settings Name (Default)**	**Recovery Action**	**Event State**
CPU degeneracy failure	SystemMonitorEvent	ESMCOMMONSERVICE[0X800002BD] ESMCOMMONSERVICE[0X800002BF] ESMCOMMONSERVICE[0XC0000838]	Set Degraded Status	Notification/ E-mail, Event Log Machine status / Set degraded status	Enable
CPU failure	OobManagement	[PET] 0x00076F00 [PET] 0x00076F08	Set Faulted Status	Notification/ E-mail, Event Log Machine status / Set faulted status	Enable
	SystemMonitorEvent	ESMCOMMONSERVICE[0XC0000451] ESMCOMMONSERVICE[0XC0000523] ESMCOMMONSERVICE[0XC0000947] ESMCOMMONSERVICE[0XC0000B04] ESMCOMMONSERVICE[0XC0000B07]			
CPU load failure	SystemMonitorEvent VMwareProvider	ESMCPUPERF[0XC0000064] ESMCPUPERF[0X80000065] ESMCPUPERF[0X80000066] ESMCPUPERF[0XC0000068] ESMCPUPERF[0X80000069] ESMCPUPERF[0X8000006A]	Set Faulted Status	Notification/ E-mail, Event Log Machine status / Set faulted status	Enable
CPU load failure recovery	SystemMonitorEvent	ESMCPUPERF[0X40000067] ESMCPUPERF[0X4000006B]	Set Ready Status	Notification/ E-mail, Event Log Machine status / Set ready status	Enable
CPU thermal failure	OobManagement	* See Subsection 1.6.8 "Settings of HW Predictive Monitoring Events."	Replace machine	Notification/ E-mail, Event Log	Enable

Event Name (Default)	Report Source	Event	Event Handler Settings Name (Default)	Recovery Action	Event State
	SystemMonitorEvent			Machine status/ Set faulted status	
				Action for machine/ Replace machine	
CPU thermal recovery	OobManagement	* See Subsection 1.6.8 "Settings of HW Predictive Monitoring Events."	no action	no action	Disable
	SystemMonitorEvent				
Predictive alert : FAN / Cooling device failure	OobManagement	* See Subsection 1.6.8 "Settings of HW Predictive Monitoring Events."	Replace machine	Notification/ E-mail, Event Log	Enable
	SystemMonitorEvent			Machine status/ Set faulted status	
				Action for machine/ Replace machine	
Clear alert : FAN / Cooling device failure recovery	OobManagement	* See Subsection 1.6.8 "Settings of HW Predictive Monitoring Events."	no action	no action	Disable
	SystemMonitorEvent				
Clear alert : FAN / Cooling device normal recovery	OobManagement	* See Subsection 1.6.8 "Settings of HW Predictive Monitoring Events."	no action	no action	Disable
	SystemMonitorEvent				
Predictive alert : voltage failure	OobManagement	* See Subsection 1.6.8 "Settings of HW Predictive Monitoring Events."	Replace machine	Notification/ E-mail, Event Log	Enable
	SystemMonitorEvent			Machine status/ Set faulted status	
				Action for machine/ Replace machine	
Clear alert : voltage failure recovery	OobManagement	* See Subsection 1.6.8 "Settings of HW Predictive Monitoring Events."	no action	no action	Disable
	SystemMonitorEvent				
Clear alert : voltage normal recovery	OobManagement	* See Subsection 1.6.8 "Settings of HW Predictive Monitoring Events."	no action	no action	Disable
	SystemMonitorEvent				
Predictive alert : power unit failure	OobManagement	* See Subsection 1.6.8 "Settings of HW Predictive Monitoring Events."	Replace machine	Notification/ E-mail, Event Log	Enable

Event Name (Default)	Report Source	Event	Event Handler Settings Name (Default)	Recovery Action	Event State
	SystemMonitorEvent			Machine status/ Set faulted status	
				Action for machine/ Replace machine	
Predictive alert : Coolant leak	OobManagement	* See Subsection 1.6.8 "Settings of HW Predictive Monitoring Events."	Replace machine	Notification/ E-mail, Event Log	Enable
	SystemMonitorEvent			Machine status/ Set faulted status	
				Action for machine/ Replace machine	
Predictive alert : chassis temperature failure	OobManagement	* See Subsection 1.6.8 "Settings of HW Predictive Monitoring Events."	Replace machine	Notification/ E-mail, Event Log	Enable
	SystemMonitorEvent			Machine status/ Set faulted status	
				Action for machine/ Replace machine	
Clear alert : chassis temperature failure recovery	OobManagement	* See Subsection 1.6.8 "Settings of HW Predictive Monitoring Events."	no action	no action	Disable
	SystemMonitorEvent				
Clear alert : chassis temperature normal recovery	OobManagement	* See Subsection 1.6.8 "Settings of HW Predictive Monitoring Events."	no action	no action	Disable
	SystemMonitorEvent				
Machine Down	SystemMonitorEvent	ESMDSVNT[0xC0000002]	Replace machine	Notification/ E-mail, Event Log	Enable
	AliveMonitor	[PeriodicalAliveMonitor] TargetDown		Machine status/ Set faulted status	
				Action for machine/ Replace machine	
start up machine	SystemMonitorEvent	ESMDSVNT[0x40000001]	Set Ready Status	Notification/ E-mail, Event Log	Enable

Event Name (Default)	Report Source	Event	Event Handler Settings Name (Default)	Recovery Action	Event State
	AliveMonitor	[PeriodicalAliveMonitor] TargetUp		Machine status/ Set faulted status	
Memory degeneration failure	OobManagement	[PET] 0x000E0301	Diagnose the Sensor / Set Faulted Status	Machine status/ Set faulted status by sensor diagnosis.	Enable
	SystemMonitorEvent	ESMCOMMONSERVICE[0X800002BE] ESMCOMMONSERVICE[0X800002C6] ESMCOMMONSERVICE[0X80000515] ESMCOMMONSERVICE[0X8000051A] ESMCOMMONSERVICE[0XC000051C]		Notification/ E-mail, Event Log	
Memory failure	OobManagement	[PET] 0x000C6F01	Diagnose the Sensor / Set Faulted Status	Machine status/ Set faulted status by sensor diagnosis.	Enable
	SystemMonitorEvent	ESMCOMMONSERVICE[0XC000044C] ESMCOMMONSERVICE[0XC00008FC] ESMCOMMONSERVICE[0XC0000903] ESMCOMMONSERVICE[0XC0000959] ESMCOMMONSERVICE[0XC0000B18] ESMCOMMONSERVICE[0XC0000B24]		Notification/ E-mail, Event Log	
Memory Recovery	OobManagement	[PET] 0x800E0301 [PET] 0x800C6F01	no action	no action	Disable
	SystemMonitorEvent	ESMCOMMONSERVICE[0X40000B17]			
VMS connection state is green	VMwareProvider	Alerm Host connection state on VMS changed from gray to green Alerm Host connection state on VMS changed from red to green	Set Ready Status	Notification/ E-mail, Event Log Machine status / Set ready status	Disable
VMS connection state is red	VMwareProvider	Alerm Host connection state on VMS changed from green to red	Set Faulted Status	Notification/ E-mail, Event Log	Disable

Event Name (Default)	Report Source	Event	Event Handler Settings Name (Default)	Recovery Action	Event State
		Alerm Host connection state on VMS changed from gray to red		Machine status / Set faulted status	
Cluster Node Down	HyperVProvider	Node[Down]	Set Faulted Status	Notification/ E-mail, Event Log Machine status / Set faulted status	Disable
Cluster Node Recovery	HyperVProvider	Node[Up]	Set Ready Status	Notification/ E-mail, Event Log Machine status / Set ready status	Disable
Cluster:Node has stopped	SystemMonitorEvent	CLUSTERPRO[0xC00008A4]	Set Faulted Status	Notification/ E-mail, Event Log Machine status / Set faulted status	Enable
Cluster:Network failure	SystemMonitorEvent	CLUSTERPRO[0xC0005217]	Set Faulted Status	Notification/ E-mail, Event Log Machine status / Set faulted status	Enable
custom group notification 1	SystemMonitorPerf	11000001	no action	no action	Disable
custom group notification 2	SystemMonitorPerf	11000002	no action	no action	Disable
custom group notification 3	SystemMonitorPerf	11000003	no action	no action	Disable
custom group notification 4	SystemMonitorPerf	11000004	no action	no action	Disable
custom group notification 5	SystemMonitorPerf	11000005	no action	no action	Disable

Event Name (Default)	Report Source	Event	Event Handler Settings Name (Default)	Recovery Action	Event State
custom machine notification 1	SystemMonitorPerf	10000001	no action	no action	Disable
custom machine notification 10	SystemMonitorPerf	1000000A	no action	no action	Disable
custom machine notification 2	SystemMonitorPerf	10000002	no action	no action	Disable
custom machine notification 3	SystemMonitorPerf	10000003	no action	no action	Disable
custom machine notification 4	SystemMonitorPerf	10000004	no action	no action	Disable
custom machine notification 5	SystemMonitorPerf	10000005	no action	no action	Disable
custom machine notification 6	SystemMonitorPerf	10000006	no action	no action	Disable
custom machine notification 7	SystemMonitorPerf	10000007	no action	no action	Disable
custom machine notification 8	SystemMonitorPerf	10000008	no action	no action	Disable
custom machine notification 9	SystemMonitorPerf	10000009	no action	no action	Disable

* You can set a suppression event for each of the machine down event and the CPU load failure event.

For instructions on how to set a suppression event, see Subsection 4.10.5, "Configuring Policy Property Settings" in *SigmaSystemCenter Configuration Guide*.

1.6.3. Settings of a Standard Policy (Virtual Machine)

The following table shows the settings of a Standard Policy (Virtual Machine).

Event Name (Default)	Report Source	Event *1	Event Handler Settings Name (Default)	Recovery Action	Event State
High CPU Load	VMwareProvider	Alarm Virtual Machine CPU Usage on VM changed from yellow to red Alarm Virtual Machine CPU Usage on VM changed from green to red Alarm Virtual Machine CPU Usage on VM changed from gray to red	Set Faulted Status	Notification/ E-mail, Event Log Machine status / Set faulted status	Enable
High CPU Load Recovery	VMwareProvider	Alarm Virtual Machine CPU Usage on VM changed from gray to green Alarm Virtual Machine CPU Usage on VM changed from yellow to green Alarm Virtual Machine CPU Usage on VM changed from red to green	Set Ready Status	Notification/ E-mail, Event Log Machine status / Set ready status	Enable
Machine Down	VMwareProvider	Alarm Virtual Machine Heartbeat on VM changed from gray to red Alarm Virtual Machine Heartbeat on VM changed from green to red	Set Faulted Status	Notification/ E-mail, Event Log Machine status / Set faulted status	Enable
Machine Off	VMwareProvider	VM on VMS in DC is powered off	Set Faulted Status	Notification/ E-mail, Event Log Machine status / Set faulted status	Enable
Machine Up	VMwareProvider	Alarm Virtual Machine Heartbeat on VM changed from gray to green Alarm Virtual Machine Heartbeat on VM changed from red to green VM on VMS in DC is powered on	Set Ready Status	Notification/ E-mail, Event Log Machine status / Set ready status	Enable

Event Name (Default)	Report Source	Event *1	Event Handler Settings Name (Default)	Recovery Action	Event State
Shortage of Memory	VMwareProvider	Alarm Virtual Machine Memory Usage on VM changed from gray to red Alarm Virtual Machine Memory Usage on VM changed from green to red Alarm Virtual Machine Memory Usage on VM changed from yellow to red	Set Degraded Status	Machine status / Set degraded status	Disable
Shortage of Memory recovery	VMwareProvider	Alarm Virtual Machine Memory Usage on VM changed from gray to green Alarm Virtual Machine Memory Usage on VM changed from red to green Alarm Virtual Machine Memory Usage on VM changed from yellow to green	Set Ready Status	Machine status / Set ready status	Disable
Target Down	AliveMonitor	No response from the machine.	Set Faulted Status	Notification/ E-mail, Event Log Machine status / Set faulted status	Disable
Target Up	AliveMonitor	The machine access recovered.	Set Ready Status	Machine status / Set ready status Machine status / Set ready status	Disable
Machine Up Notification	HyperVProvider	Resources(VM)[Online]	Set Ready Status	Notification/ E-mail, Event Log Machine status / Set ready status	Enable
Machine Down Notification	HyperVProvider	Resources(VM)[Failed]	Set Faulted Status	Notification/ E-mail, Event Log Machine status / Set faulted status	Enable

Event Name (Default)	Report Source	Event *1	Event Handler Settings Name (Default)	Recovery Action	Event State

*1 A suppressing function is configured to event monitoring. (For the details of the suppressing function, see Subsection 1.1.6, "Failure Recovery With a Policy" in *SigmaSystemCenter Configuration Guide*.)

The corresponding events and suppressing events are as follows:

- The suppressing event of the event *High CPU Load* is *High CPU Load Recovery* and *Machine Off.*
- The suppressing event of the event *High CPU Load Recovery* is *High CPU Load* and *Machine Off.*
- The suppressing event of the event *Machine Down* is *Machine Up*
- The suppressing event of the event *Machine Up* is *Machine Down*
- The suppressing event of the event *Shortage of Memory* is *Shortage of Memory recovery* and *Machine Off.*
- The suppressing event of the event *Shortage of Memory recovery* is *Shortage of Memory* and *Machine Off.*

In addition, the time to monitor these suppressing events is set to 180 seconds.

*2 Suppression events of the Policy Property setting window cannot be set on the above events.

*3 For a Xen environment, enable the events whose names are **Target Down** and **Target Up** and report source is **AliveMonitor** because events from the virtual infrastructure do not occur. For details, see Subsection 2.12.11, "Alive Monitoring Virtual Machines" in *SigmaSystemCenter Overview Reference Guide.*

1.6.4. Settings of a Standard Policy (VM Server), Standard Policy (VM Server Predictive), Standard Policy (VM Server Power save)

The following table shows the settings of a Standard Policy (VM Server), a Standard Policy (VM Server Predictive) and a Standard Policy (VM Server Power save).

Event Name (Default)	**Report Source**	**Event**	**Event Handler Settings Name (Default)**	**Recovery Action**	**Event State**
VMS connection state is green *1	VMwareProvider	Alarm Host connection state on VMS changed from gray to green Alarm Host connection state on VMS changed from red to green	Set Ready Status	Notification/ E-mail, Event Log	Disable
				Machine status / Set ready status	
VMS connection state is red *1	VMwareProvider	Alarm Host connection state on VMS changed from gray to red Alarm Host connection state on VMS changed from green to red	Move all running VMs on the VM server	Notification/ E-mail, Event Log	Disable
				Machine status / Set faulted status	
				Action for machine/ Diagnose and Power OFF	
				Action for VMS / Move all running VMs on the VM server. (Migration, Failover)	
Machine Up	SystemMonitorEvent	ESMDSVNT[0x40000001] he server access recovered	Set Ready Status	Notification/ E-mail, Event Log	Enable
	AliveMonitor	The machine access recovered.		Machine status / Set ready status	

Event Name (Default)	**Report Source**	**Event**	**Event Handler Settings Name (Default)**	**Recovery Action**	**Event State**
Machine Down	SystemMonitorEvent	ESMDSVNT[0xC0000002] No response from the server	Move all running VMs on the VM server	Notification/ E-mail, Event Log	Enable
				Machine status / Set faulted status	
	AliveMonitor	No response from the machine.		Action for machine/ Diagnose and Power OFF	
				Action for VMS / Move all running VMs on the VM server. (Migration, Failover)	
Cluster Node Down	HyperVProvider	Node[Down]	Set Faulted Status	Notification/ E-mail, Event Log	Disable
				Machine status / Set faulted status	
Cluster Node Recovery	HyperVProvider	Node[Up]	Set Ready Status	Notification/ E-mail, Event Log	Disable
				Machine status / Set ready status	
Scaleout Recommendation	OptimizedPlacement	Scaleout Recommendation	Notification	Notification/ E-mail, Event Log	Enable
Resource Pool Consumption : Critical Asserted	OptimizedPlacement	Resource-Pool Critical Asserted	Notification	Notification/ E-mail, Event Log	Enable
Resource Pool Consumption : Warning Asserted	OptimizedPlacement	Resource-Pool Warning Asserted	Notification	Notification/ E-mail, Event Log	Enable
over load(SysmonPerf)	SystemMonitorPerf	11000006	load balance	Action for VMS / Load balance VMServer	Enable
low load(SysmonPerf)	SystemMonitorPerf	11000007	power save	Action for VMS / Power save VMserver	*2

In addition to the above events, the HW Predictive event (see Subsection 1.6.8) is provided. ・ The HW Predictive event is disabled in Standard Policy (VM Server) and Standard Policy (VM Server Power save). ・ The HW Predictive event is enabled in Standard Policy (VM Server Predictive). (Recovery actions are disabled.)

*1 This is a monitoring setting for events of machine down and startup of a virtual machine server available with working together with vCenter Server. You can select the operation mode of configuring to switch *machine down* and *startup machine* available with working together with NEC ESMPRO Manager and restoration process.

If you use ESX 5.0, work with it by switching to "machine down" or "startup machine" in the Recovery Action so that vCenter Server can monitor events.

*2 Disabled in Standard Policy (VM Server) and Standard Policy (VM Server Predictive). Enabled in Standard Policy (VM Server Power save).

*3 You can set the *Suppress Machine inaccessible error* towards the VMS Access Impossible event and the Target Access Impossible event.

The *Suppress CPU Load failure* is not set.

For instructions on how to set the suppression on an event, see Subsection 4.10.5, "Configuring Policy Property Settings" in *SigmaSystemCenter Configuration Guide*.

1.6.5. Standard Policy (VM Server ESXi)

The following table shows the settings of a Standard Policy (VM Server ESXi).

Event Name (Default)	**Report Source**	**Event**	**Event Handler Settings Name (Default)**	**Recovery Action**	**Event State**
VMS connection state is green	StandaloneEsxProvider	Alarm Host connection state on VMS changed from red to green	Set Ready Status	Notification/ E-mail, Event Log	Enable
				Machine status / Set ready status	
VMS connection state is red	StandaloneEsxProvider	Alarm Host connection state on VMS changed from green to red	Move all VMs on the VM server	Notification/ E-mail, Event Log	
				Machine status / Set faulted status	
				Action for machine/ Diagnose and Power OFF	
				Action for VMS / Move all VMs on the VM server. (Failover)	
Target Down	AliveMonitor	No response from the machine.	Move all VMs on the VM server	Notification/ E-mail, Event Log	Disable

Event Name (Default)	Report Source	Event	Event Handler Settings Name (Default)	Recovery Action	Event State
				Machine status / Set faulted status	
				Action for machine/ Diagnose and Power OFF	
				Action for VMS / Move all VMs on the VM server. (Failover)	
Target Up	AliveMonitor	The machine access recovered.	Set Ready Status	Notification/ E-mail, Event Log	Disable
				Machine status / Set ready status	
Alarm Datastore on VMs can not be available	StandaloneEsxProvider	Alarm Datastore on VMS can not be available	Move all VMs on the VM server	Notification/ E-mail, Event Log	Enable
				Machine status / Set faulted status	
				Action for machine/ Diagnose and Power OFF	
				Action for VMS / Move all VMs on the VM server. (Failover)	
Resource Pool Consumption : Critical Asserted	OptimizedPlacement	Resource-Pool Critical Asserted	Notification	E-mail, Event Log	Enable
Resource Pool Consumption : Warning Asserted	OptimizedPlacement	Resource-Pool Warning Asserted	Notification	Notification/ E-mail, Event Log	Enable

* In addition to the above events, the HW Predictive event (see Subsection 1.6.8) is set to "enabled". (However, an event that Recovery Action is No Action is set to "disabled".)

* Suppression events of the Policy Property setting window cannot be set on the above events.

1.6.6. Settings of a Standard Policy (VM Server Hyper-V), a Standard Policy (VM Server Hyper-V Predictive), And a Standard Policy (VM Server Hyper-V Power Save)

The following table shows the settings of a Standard Policy (VM Server Hyper-V), a Standard Policy (VM Server Hyper-V Predictive), and a Standard Policy (VM Server Hyper-V Power Save).

Event Name (Default)	**Report Source**	**Event**	**Event Handler Settings Name (Default)**	**Recovery Action**	**Event State**
Cluster Node Down *1	HyperVProvider	Node[Down]	Set Faulted Status	Notification/ E-mail, Event Log Machine status / Set faulted status	Enable
Cluster Node Recovery *1	HyperVProvider	Node[Up]	Set Ready Status	Notification/ E-mail, Event Log Machine status / Set ready status	Enable
Scaleout Recommendation	OptimizedPlacement	Scaleout Recommendation	Notification	Notification/ E-mail, Event Log	Enable
Resource Pool Consumption : Critical Asserted	OptimizedPlacement	Resource-Pool Critical Asserted	Notification	Notification/ E-mail, Event Log	Enable
Resource Pool Consumption : Warning Asserted	OptimizedPlacement	Resource-Pool Warning Asserted	Notification	Notification/ E-mail, Event Log	Enable
over load (SysmonPerf)	SystemMonitorPerf	11000006	load balance	Action for VMS/ Load balance VMServer	Enable
low load (SysmonPerf)	SystemMonitorPerf	11000007	power save	Action for VMS/ Power save Vmserver *	*2
VMS connection state is green	VMwareProvider	Alarm Host connection state on VMS changed from gray to green	Set Ready Status	Notification/ E-mail, Event Log	Disable

Event Name (Default)	Report Source	Event	Event Handler Settings Name (Default)	Recovery Action	Event State
		Alarm Host connection state on VMS changed from red to green		Machine status / Set ready status	
VMS connection state is red	VMwareProvider	Alarm Host connection state on VMS changed from gray to red Alarm Host connection state on VMS changed from green to red	Move all running VMs on the VM server	Notification/ E-mail, Event Log	Disable
				Machine status / Set faulted status	
				Action for machine/ Diagnose and Power OFF	
				Action for VMS/ Move all VMs on the VM server. (Migration, Failover)	
Machine Up	SystemMonitorEvent	ESMDSVNT[0x40000001] The server access recovered	Set Ready Status	Notification/ E-mail, Event Log	Disable
	AliveMonitor	The machine access recovered.		Machine status / Set ready status	
Machine Down	SystemMonitorEvent	ESMDSVNT[0xC0000002] No response from the server	Set Faulted Status	Notification/ E-mail, Event Log	Disable
	AliveMonitor	No response from the machine.		Machine status / Set faulted status	
Network Interface Failure	HyperVProvider	NetworkInterface[Failed] NetworkInterface[Unavailable] NetworkInterface[Unreachable]	Set Degraded status	Notification/ E-mail, Event Log	*3
				Machine status / Set degraded status	
Network Interface Recovery	HyperVProvider	NetworkInterface[Up]	no action	no action	Disable

Event Name (Default)	Report Source	Event	Event Handler Settings Name (Default)	Recovery Action	Event State
In addition to the above events, the HW Predictive event (see Subsection 1.6.8) is provided. ・ The HW Predictive event is disabled in Standard Policy (VM Server Hyper-V). ・ The HW Predictive event is enabled in Standard Policy (VM Server Hyper-V Predictive). (Recovery events are disabled.)					

*1 Failure and recovery events of connectivity to virtual machine servers are monitored through Microsoft Failover Cluster. An alternative way to monitor virtual machine servers is provided by NEC ESMPRO Manager. The operation form of the alternative way is that replaces recovery action with "Machine Access Impossible" and "Machine Access Recovery" which are detected by NEC ESMPRO Manager.

*2 Disabled in Standard Policy (VM Server Hyper-V) and Standard Policy (VM Server Hyper-V Predictive).
Enabled in Standard Policy (VM Server Hyper-V Power save)

*3 Disabled in Standard Policy (VM Server Hyper-V) .
Enabled in Standard Policy (VM Server Hyper-V Predictive)

1.6.7. Settings of a System Policy (Manager)

The following table shows the settings of a System Policy (Manager).

Event Name (Default)	Report Source	Event	Event Handler Settings Name (Default)	Recovery Action	Event State
CSV Scarce Free Space	HyperVProvider	CSV[Scarce]	Notification	Notification/ E-mail, Event Log	Enable
CSV Abundant Free Space	HyperVProvider	CSV[Abundant]	Notification	Notification/ E-mail, Event Log	Disable
CSV Paused-Critical	HyperVProvider	CSV[Critical]	Notification	Notification/ E-mail, Event Log	Enable
CSV Paused-Critical Recovery	HyperVProvider	CSV[NonCritical]	Notification	Notification/ E-mail, Event Log	Disable
Datastore Overallocation on disk to red	VMwareProvider	Alarm Datastore Overallocation on disk on DATASTORE changed from green to red Alarm Datastore Overallocation on disk on DATASTORE changed from yellow to red Alarm Datastore Overallocation on disk on DATASTORE changed from gray to red	Notification	Notification/ E-mail, Event Log	Enable

Event Name (Default)	Report Source	Event	Event Handler Settings Name (Default)	Recovery Action	Event State
Datastore Overallocation on disk to green	VMwareProvider	Alarm Datastore Overallocation on disk on DATASTORE changed from red to green Alarm Datastore Overallocation on disk on DATASTORE changed from yellow to green Alarm Datastore Overallocation on disk on DATASTORE changed from gray to green	Notification	Notification/ E-mail, Event Log	Disable
Datastore usage on disk to red	VMwareProvider	Alarm Datastore usage on disk on DATASTORE changed from green to red Alarm Datastore usage on disk on DATASTORE changed from yellow to red Alarm Datastore usage on disk on DATASTORE changed from gray to red	Notification	Notification/ E-mail, Event Log	Enable
Datastore usage on disk to green	VMwareProvider	Alarm Datastore usage on disk on DATASTORE changed from red to green Alarm Datastore usage on disk on DATASTORE changed from yellow to green Alarm Datastore usage on disk on DATASTORE changed from gray to green	Notification	Notification/ E-mail, Event Log	Disable
CSV Recovery	HyperVProvider	CSV[NoFaults]	Notification	Notification/ E-mail, Event Log	Enable
CSV Degraded	HyperVProvider	CSV[NoDirectIO]	Notification	Notification/ E-mail, Event Log	Enable
CSV Failure	HyperVProvider	CSV[NoAccess] CSV[Maintenance]	Notification	Notification/ E-mail, Event Log	Enable
Cluster Disk Recovery	HyperVProvider	Resources(PhysicalDisk)[Online]	Notification	Notification/ E-mail, Event Log	Enable
Cluster Disk Failure	HyperVProvider	Resources(PhysicalDisk)[Offline] Resources(PhysicalDisk)[Failed]	Notification	Notification/ E-mail, Event Log	Enable
Network Failure	HyperVProvider	Network[Down] Network[Partitioned] Network[Unavailable]	Notification	Notification/ E-mail, Event Log	Enable
Network Recovery	HyperVProvider	Network[Up]	Notification	Notification/ E-mail, Event Log	Enable

Event Name (Default)	Report Source	Event	Event Handler Settings Name (Default)	Recovery Action	Event State
Cluster Down	HyperVProvider	Cluster[NotRunning]	Notification	Notification/ E-mail, Event Log	Enable
Cluster Up	HyperVProvider	Cluster[Running]	Notification	Notification/ E-mail, Event Log	Enable

* Suppression events of the Policy Property setting window cannot be set on the above events.

Content of mails and event logs are different from the content of other policies' notification. (See Subsection 1.7.1, "Notification/ E-mail, Event Log".)

1.6.8. Settings of HW Predictive Monitoring Events

The HW Predictive Monitoring events are configured in the policies listed below:

- Standard Policy (VM Server)
- Standard Policy (VM Server Power save)
- Standard Policy (VM Server Predictive)
- Standard Policy (VM Server ESXi)
- Standard Policy (VM Server Hyper-V)
- Standard Policy (VM Server Hyper-V Predictive)

The following table shows the settings of a HW Predictive Monitoring event.

Event Name (Default)	Report Source	Event	Event Handler Settings Name (Default)
Memory degeneration failure	OobManagement	[PET] 0x000E0301	Diagnose the Sensor / Set Faulted Status
	SystemMonitorEvent	ESMCOMMONSERVICE[0X80000515]	
Memory failure	OobManagement	[PET] 0x000C6F01	Diagnose the Sensor / Set Faulted Status
	SystemMonitorEvent	ESMCOMMONSERVICE[0XC000044C] ESMCOMMONSERVICE[0XC0000903]	
Memory Recovery	OobManagement	[PET] 0x800E0301 [PET] 0x800C6F01	no action
	SystemMonitorEvent	ESMCOMMONSERVICE[0X40000B17]	

Event Name (Default)	**Report Source**	**Event**	**Event Handler Settings Name (Default)**
Processor disabled	OobManagement	[PET] 0x00076F00 [PET] 0x00076F08	Diagnose the Sensor / Set Faulted Status
	SystemMonitorEvent	ESMCOMMONSERVICE[0XC0000451] ESMCOMMONSERVICE[0XC0000523]	
CPU thermal failure	OobManagement	[PET] 0x00076F01	Move all running VMs on the VM server
	SystemMonitorEvent	ESMCOMMONSERVICE[0XC0000454]	
CPU thermal recovery	OobManagement	[PET] 0x80076F01	no action
	SystemMonitorEvent	ESMCOMMONSERVICE[0X40000949]	
Predictive alert : chassis temperature failure	OobManagement	[PET] 0x00010102 [PET] 0x00010104 [PET] 0x00010109 [PET] 0x0001010B	Move all running VMs / Server shutdown * For Standard Policy (VM Server ESXi), "Move all VMs on the VM server / Server shutdown"
	SystemMonitorEvent	ESMCOMMONSERVICE[0XC0000066] ESMCOMMONSERVICE[0XC0000070] ESMCOMMONSERVICE[0XC0000064] ESMCOMMONSERVICE[0XC000093E] ESMCOMMONSERVICE[0XC0000072]	
Predictive alert : power unit failure	OobManagement	[PET] 0x00090B05	
	SystemMonitorEvent	ESMCOMMONSERVICE[0XC0000915]	
Predictive alert : voltage failure	OobManagement	[PET] 0x00020102 [PET] 0x00020104 [PET] 0x00020109 [PET] 0x0002010B [PET] 0x00020703	
	SystemMonitorEvent	ESMCOMMONSERVICE[0XC00001FD] ESMCOMMONSERVICE[0XC00001FF] ESMCOMMONSERVICE[0XC0000203] ESMCOMMONSERVICE[0XC0000205] ESMCOMMONSERVICE[0XC0000932]	
Predictive alert : FAN / Cooling device failure	OobManagement	[PET] 0x000A0102 [PET] 0x000A0104 [PET] 0x000A0109 [PET] 0x000A010B [PET] 0x00040102 [PET] 0x00040104 [PET] 0x00040109 [PET] 0x0004010B [PET] 0x00040301	

Event Name (Default)	Report Source	Event	Event Handler Settings Name (Default)
	SystemMonitorEvent	ESMCOMMONSERVICE[0XC00000D0] ESMCOMMONSERVICE[0XC00000D2] ESMCOMMONSERVICE[0XC00000D6] ESMCOMMONSERVICE[0XC00000D8] ESMCOMMONSERVICE[0XC00000C8]	
Predictive alert : Coolant leak	OobManagement	[PET] 0x000A0702	
	SystemMonitorEvent	ESMCOMMONSERVICE[0XC0000A8C]	
Clear alert : chassis temperature failure recovery	OobManagement	[PET] 0x80010102 [PET] 0x80010109 [PET] 0x00010701	no action
	SystemMonitorEvent	ESMCOMMONSERVICE[0X8000006B] ESMCOMMONSERVICE[0X8000006A] ESMLOCALPOLLING[0X8000006A] ESMCOMMONSERVICE[0X8000093F]	
Clear alert : voltage failure recovery	OobManagement	[PET] 0x80020102 [PET] 0x80020109 [PET] 0x00020701	no action
	SystemMonitorEvent	ESMCOMMONSERVICE[0X800001FE] ESMCOMMONSERVICE[0X80000204] ESMCOMMONSERVICE[0X8000090F]	
Clear alert : FAN / Cooling device failure recovery	OobManagement	[PET] 0x800A0102 [PET] 0x800A0109 [PET] 0x80040102 [PET] 0x80040109 [PET] 0x00040701 [PET] 0x000A0701	no action
	SystemMonitorEvent	ESMCOMMONSERVICE[0X800000D1] ESMCOMMONSERVICE[0X800000D7] ESMCOMMONSERVICE[0X400002C3] ESMCOMMONSERVICE[0X400000CD]	
Clear alert : chassis temperature normal recovery	OobManagement	[PET] 0x80010100 [PET] 0x80010107 [PET] 0x80010301 [PET] 0x00010700	no action
	SystemMonitorEvent	ESMCOMMONSERVICE[0X40000068] ESMCOMMONSERVICE[0X40000069] ESMCOMMONSERVICE[0X40000908] ESMCOMMONSERVICE[0X4000092F] ESMCOMMONSERVICE[0X40000941] ESMCOMMONSERVICE[0X40000943]	

Event Name (Default)	**Report Source**	**Event**	**Event Handler Settings Name (Default)**
Clear alert : voltage normal recovery	OobManagement	[PET] 0x80020100 [PET] 0x80020107 [PET] 0x80020301 [PET] 0x00020700	no action
	SystemMonitorEvent	ESMCOMMONSERVICE[0X400001FC] ESMCOMMONSERVICE[0X40000202] ESMCOMMONSERVICE[0X40000902] ESMCOMMONSERVICE[0X40000931] ESMCOMMONSERVICE[0X40000BAD] ESMCOMMONSERVICE[0X400001FA] SystemMonitorEvent	
Clear alert : FAN / Cooling device normal recovery	OobManagement	[PET] 0x80040100 [PET] 0x80040107 [PET] 0x80040301 [PET] 0x00040700 [PET] 0x800A0100 [PET] 0x800A0107 [PET] 0x000A0700	no action
	SystemMonitorEvent	ESMCOMMONSERVICE[0X400000CF] ESMCOMMONSERVICE[0X400000D5] ESMCOMMONSERVICE[0X4000090D] ESMCOMMONSERVICE[0X40000911] ESMCOMMONSERVICE[0X40000B01] ESMCOMMONSERVICE[0X400002C3] ESMCOMMONSERVICE[0X400000CA] ESMCOMMONSERVICE[0X400000CD] ESMCOMMONSERVICE[0X40000945]	

* Suppression events of the Policy Property setting window cannot be set on the above events.

Action settings that Event Handler Settings Name are "Diagnose the Sensor / Set Faulted Status" are as follows:

- Machine status / Set faulted status by sensor diagnosis
- Notification/ E-mail, Event Log

Action settings that Event Handler Settings Name are "Move all running VMs on the VM server" are as follows:

- Notification/ E-mail, Event Log
- Machine status / Set faulted status

◆ Action for VMS / Move all running VMs on the VM server. (Failover)

Action settings that Event Handler Settings Name are "Move all running VMs / Server shutdown" (for Standard Policy (VM Server ESXi), "Move all VMs on the VM server / Server shutdown") are as follows:

◆ For policies other than Standard Policy (VM Server ESXi)
- Machine status / Set faulted status by sensor diagnosis
- Notification/ E-mail, Event Log
- Action for VMS / Move all running VMs on the VM server. (Migration, Failover)
- Action for machine / Shutdown VM Server (Predictive)

  * It must be executed after starting virtual machines.

◆ For Standard Policy (VM Server ESXi)
- Machine status / Set faulted status by sensor diagnosis
- Notification/ E-mail, Event Log
- Action for VMS / Move all VMs on the VM server (Quick Migration, Failover)
- Action for VMS / Shutdown VM Server (Predictive)

* In the case of ESXi, the virtual machines that were Failovered are not started. This action executes operations for the process of Failover which enables the next startup of the virtual machines, but does not execute the startup operation.

Note:

・To detect OOB Management events, see Section 3.10, "Preparing for the Use of Out-of-Band (OOB) Management" in *SigmaSystemCenter Configuration Guide* and perform the procedures from Subsection 3.10.1, "Configuring IP Address of BMC" to Subsection 3.10.3, "Configuring Alert Destination of PET and Alert Level." However, OOB Management events cannot be detected from a managed machine where NEC ESMPRO Agent is working.

・If you are using ESX (Linux), disable the shutdown function of a machine to be monitored during an error occurrence, referring to Subsection 3.2.2, "Other Setting" in *NEC ESMPRO Agent (for Linux) User's Guide* to use events of SystemMonitorEvent.

・If you are using Hyper-V (Windows), disable the shutdown function of a machine to be monitored during the error occurrence by performing the following procedure:

1. From Control Panel, double-click NEC ESMPRO Agent. Click the General tab and Report Setting on the NEC ESMPRO Agent Properties dialog box to activate the Alert Manager.
2. Select Base Setting, located on the setting menu on the Alert Manager.
3. Click the Function valid/invalid status on the setting of the time until shutdown, located on the Other tab to change from green to red.

1.7. List of Policy Actions

In SigmaSystemCenter, you can customize actions for events of specified errors and create a policy. SigmaSystemCenter provides the following actions.

- Notification/ E-mail, Event Log
- Machine status / Set ready status
- Machine status / Set degraded status
- Machine status / Set faulted status
- Machine status / Set faulted status by sensor diagnosis
- Machine status / Set ready status by HardwarePartsStatus diagnosis
- Machine status / Set ready status by Total recover diagnosis
- Action for machine / Startup machine
- Action for machine / Reboot machine
- Action for machine / Shutdown machine
- Action for machine / Turn on LED
- Action for machine / Turn off LED
- Action for machine / Replace machine
- Action for machine / Replace machine(Immediate Power OFF)
- Action for machine / Diagnose and Power OFF
- Action for Group / Scaleout Add a machine to the group
- Action for Group / Scaleout Startup machines in the group
- Action for Group / Create a machine to the group
- Action for Group / Scalein Delete a machine from the group
- Action for Group / Delete a virtual machine from the group
- Action for Group / Scalein Suspend machines in the group
- Action for Group / Scalein Shutdown machines in the group
- Action for Group / Apply VM Optimized Placement Rule
- Action for Group / Refill the reserved VM Server
- Action for VMS / Move all running VMs on the VM server. (Failover)
- Action for VMS / Move all running VMs on the VM server. (Migration)
- Action for VMS / Move all running VMs on the VM server. (Migration, Failover)
- Action for VMS / Move all VMs on the VM server. (Failover)
- Action for VMS / Move all VMs on the VM server. (Migration, Failover)
- Action for VMS / Move all VMs on the VM server. (Quick Migration, Failover)
- Action for VMS / Power save VM server
- Action for VMS / Load balance VM server
- Action for VMS / Shutdown VM Server (Predictive)
- Action for VMS / Apply VM Optimized Placement Rule
- Execute Local Script
- Reset of an action execution result

Note:

・ Policy actions for moving a single virtual machine are abolished with SigmaSystemCenter 2.0. In substitution, policy actions for Power save Virtual Machine server and Load balance Virtual Machine Server are added,

If you were using the abolished policy actions before upgrading SigmaSystemCenter, the policy actions are converted to *No action*.

・ You need to note the point below for the actions:

- Action for Group / Scalein Delete a machine from the group
- Action for Group / Delete a virtual machine from the group
- Action for Group / Scalein Suspend machines in the group
- Action for Group / Scalein Shutdown machines in the group
- Action for machine / Shutdown machine
- Action for machine / Diagnose and Power OFF

If the number of machines normally running at the target group is under the specified minimum number (set in the Min Running Machine Count box), the job ends normally with warning and no action is executed. If zero is set in the Min Running Machine Count box, there is a possibility that the number of machines normally activated reaches zero.

For details of the actions, see the following subsections.

Reference: For details of actions which are executed in the process of changing machine configuration, see Section 1.5, "Changes in Machine Configuration" in *SigmaSystemCenter Overview Reference Guide*.

1.7.1. Notification/ E-mail, Event Log

Notifies detected contents and the start and result of actions by a policy by sending emails and registering the event to the event logs.

Registering an event to the event logs and E-mail notification are commanded at the timing of event detection, starting an action, or completing an action.

For details of setting E-mail destination address or other settings, see Subsection 2.4.2, "Configuring the Mail Reporting" in *SigmaSystemCenter Configuration Guide*.

You cannot set E-mail notification and event log registration to each policy and event.

This action can be executed in parallel with other operations on the same machine.

The timings of notification, event log ID, and mail messages are as follows.

For the registration information according to event log ID, see Subsection 2.2.1, "Event Logs of SystemProvisioning."

- When receiving notification of an error

  Event log ID: 502 and any of 530, 531, and 532

  Mail message:

  Received a notification. ("Report Information")

- When starting process for an error

  Event log ID: 502 and 540

  Mail message:

  The action ("Process Name") was started. Management ID:"Management ID"

- When succeeding process for an error

  Event log ID: 502 and 541

  Mail message:

  The action ("Process Name") has been completed. Management ID: "Management ID"

- When failing process for an error

  Event log ID: 502 and 542

  Mail message:

  The action ("Process Name") was terminated because an error occurred. Management ID: "Management ID"

- When process for an error is canceled

  Event log ID: 502 and 543

  Mail message:

  The action ("Process Name") has been canceled. Management ID: "Management ID"

However, mail messages sent by System Policy (Manager) are as follows:

- When receiving notification of an error

  Event log ID: 502 and 536

  Mail message:

  found manager event

  event number: "EventID"

  manager name: "Manager Name"

  event message: "Information"

Note:

・ You are notified by SystemPolicy (Manager) only when receiving an event.

・ Contents of notification by SystemPolicy (Manager) is defined in the following file, stored in the SystemProvisioning installation folder:

SystemProvisioning installation folder\conf\PvmCustom.xml

1.7.2. Machine Status / Set Ready Status

Configures the Hardware Status of a target machine to "Ready".

This action can be executed in parallel with other operations on the same machine.

1.7.3. Machine Status / Set Degraded Status

Configures the Hardware Status of a target machine to "Degraded."

1.7.4. Machine Status / Set Faulted Status

Configures the Hardware Status of t a target machine to "Faulted."

1.7.5. Machine Status / Set Faulted Status by Sensor Diagnosis

This action obtains hardware sensor information and analyzes it.

It sets Hardware Status to "Faulted" and ends normally if a sensor is in critical state.

Additionally, this action does not change hardware status and ends abnormally if any sensors have no problems. If the next action’s execution condition is "Success", the next action will not be executed.

Sensors are displayed in the Sensor tab. To display the Sensor tab, click the Resource, the Machine icon, and the IPMI information on Configuration menu. Then, click the Sensor on the IPMI Information screen. If a sensor’s Exclude from sensor diagnosis check box is not selected, the sensor is a target of the sensor diagnosis.

Note:

・To use this function correctly, see Subsection 1.5.2, "Sensor Diagnosis."

・You can see the detected sensor alerts at the Sensor tab, which is displayed by clicking Resource - Machine icon - IPMI Information - Sensor. However, sensors with problems might not be detected in the following cases:

・You collected sensor information after finishing the sensor diagnosis.

・You clicked the Refresh on the Sensor tab after finishing the sensor diagnosis.

・During the sensor diagnosis, "Faulted" status was set because the sensor could not be read or BMC did not respond.

In the above cases, you cannot see the sensor alerts at the Sensor tab but you can see logs of the sensor diagnosis at the Job List and the Event List instead. The Job List and the Event List appear on the Main Window by clicking the Job on the Monitor view.

At the Job List, you can see the details of a job of sensor diagnosis by clicking an event number link of the job. Also you can see it at the Event List in the same way.

1.7.6. Machine Status / Set Ready Status by HardwarePartsStatus Diagnosis

Checks that statuses relevant to a target machine in detail. If all the statuses are normal, this action set Normal for the hardware status and ends normally.

If any not normal status exists, this action does not change the hardware status and ends abnormally. The following action's execution condition is "Success", the action is not executed.

Target statuses in detail are displayed in Resource － Machine Status Information － Hardware Status (Status Detail) － Status List.

Reference: For details of hardware parts status diagnosis, see Subsection 1.5.3, "Hardware Parts Status Diagnosis."

1.7.7. Machine Status / Set Ready Status by Total Recover Diagnosis

Diagnoses a target machine comprehensively based on the all statuses relevant to the target machine (status as a virtual machine server, sensor status, and machine status in detail). If this action judges the target machine is Normal, this action set Normal for the hardware status and ends normally.

If this action judges the target machine is not normal, this action does not change the hardware status and ends abnormally. If the following action's execution condition is "Success", the action is not executed.

If the target machine is not a virtual machine server, diagnoses as a virtual machine server are not executed. If the target machine is not managed by Out-of-Band Management, the sensor diagnosis is not executed. In this case, this action judges the status based on the results of available diagnoses.

Reference: For details of Total recover diagnosis, see Subsection 1.5.4, "Total Recover Diagnosis."

1.7.8. Action for Machine / Startup Machine

Starts a target machine.

1.7.9. Action for Machine / Reboot Machine

Restarts a target machine.

1.7.10. Action for Machine / Shutdown Machine

Shuts down a target machine.

However, this action is not executed if there is only one machine that is running in not *faulted* status, but powered ON status, left in a target group.

1.7.11. Action for Machine / Turn on LED

Requests a target machine to turn on the LED indicator.

This action can be executed in parallel with other operations on the same machine.

1.7.12. Action for Machine / Turn off LED

Requests a target machine to turn off the LED indicator.

This action can be executed in parallel with other operations on the same machine.

1.7.13. Action for Machine / Replace Machine

Replaces a target machine with a machine standing by in a pool or shared pool.

If SystemProvisioning failed to shut down the target machine, SystemProvisioning executes Power OFF to the machine immediately.
The replaced machine is stood by in a group pool.

1.7.14. Action for machine / Replace machine(Immediate Power OFF)

Replaces a target machine with a machine standing by in a pool or shared pool.

SystemProvisioning does not shut down the target machine and executes Power OFF to the machine immediately.

The replaced machine is stood by in a group pool.

1.7.15. Action for machine / Diagnose and Power OFF

Diagnoses status of a target machine and if the machine can be powered off, executes Power OFF to the machine immediately.

First, this action diagnoses whether SystemProvisioning can recover the failed machine or not by the diagnosis function in detail. If the failed machine is a virtual machine server (VMware or XenServer), SystemProvisioning executes the function.

By the result of diagnosis, if SystemProvisioning judges that the machine does not need the recovery process or that SystemProvisioning should not execute the recovery process at the timing because of the circumstances, the process ends with an error. If SystemProvisioning judges that there is a possibility of recovery of the machine, SystemProvisioning starts the Power OFF process of the failed machine to recover the machine.

In the Power OFF process, SystemProvisioning checks whether it can connect to a failed virtual machine server or not firstly, and if SystemProvisioning cannot connect to the virtual machine server, the power control through DPM shuts down powered on virtual machines on the virtual machine server. This shut down is for keeping the virtual machines as safe as possible, supposing the status that although the management server cannot access to the virtual machine server, the virtual machine server is not actually down.

Secondly, SystemProvisioning executes ACPI shutdown on the failed machine. If it fails, SystemProvisioning executes Power OFF to the failed machine and completes the process for recovery process to be executed. If it fails the Power OFF process, SystemProvisioning completes the process with Warning output to the Operations log because there is a possibility of succeeding the following recovery processes.

If a failed machine is not a virtual machine server (VMware or XenServer), SystemProvisioning does not execute the diagnosis process, shuts down the machine, and completes the process. If it fails the execution of shut down, it executes Power OFF. After executing Power OFF, SystemProvisioning completes the process regardless of the execution result of Power OFF.

Reference: For the details of the diagnosis function, see Section 1.5, "About Diagnosis."

1.7.16. Action for Group / Scaleout Add a Machine to the Group

Adds a machine in a target group to activate the machine.

1.7.17. Action for Group / Scaleout Startup Machines in the Group

Starts up stopped machines in the machines that are added to a target group by allocating a host to a resource.

1.7.18. Action for Group / Create a Machine to the Group

Creates and adds a machine (virtual machines) in a target group to activate the machine.

1.7.19. Action for Group / Scalein Delete a Machine From the Group

Deletes or stops one machine running in a target group according to the setting of a target group.

The deleted machine is moved to a pool.

1.7.20. Action for Group / Delete a Virtual Machine From the Group

Deletes a running machine (virtual machine) in the corresponding operation group.

Completely deletes the machine.

If a virtual machine server is being stopped, this action starts up the virtual machine server to delete. If a policy with a power save event is applied for a virtual machine server, the virtual machine server is shut down after the power save event occurs. In other cases, delete virtual machines on a target virtual machine server and shut down the virtual machine server when the virtual machine server starts up.

1.7.21. Action for Group / Scalein Suspend Machines in the Group

Suspends a machine running in a target group according to the setting of the target group.

1.7.22. Action for Group / Scalein Shutdown Machines in the Group

Stops a machine running in a target group according to the setting of the target group.

1.7.23. Action for Group / Apply VM Optimized Placement Rule

Relocates running virtual machines according to the Optimized Placement Rule on a virtual machine server running in a target group.

If virtual machines are constrained on stopped virtual machine servers by the Optimized Placement Rule, SystemProvisioning starts the corresponding virtual machine servers and moves the virtual machines.

Operations are not executed to virtual machines to which the Optimized Placement Rule is not set.

1.7.24. Action for Group / Refill the Reserved VM Server

Starts up a virtual machine server running on a target virtual machine model so that it satisfies the condition of a spare machine in the Optimized Placement setting.

The spare virtual machine servers are selected from the ones on which no virtual machine is running and not in failure status or maintenance status.

The number of spare machines is the value of "Specify the number of machines to leave powered on even if they have no running VMs in order to respond quickly to load changes. (Power Saving)" in Optimized Placement.

This action is enabled only for events detected in a virtual machine server.

"Action for VMS / Power Save VM server" has the same functions as this action, setting both actions for one event is not recommended.

1.7.25. Action for VMS / Move all running VMs on the VM server. (Failover)

Moves a virtual machine running on a target virtual machine server to other virtual machine server.

As the moving method, Failover is used.

This action is only valid for events detected on virtual machine servers.

In addition, if the target virtual machine server is Pool Master of XenServer and the machine is stopped, SystemProvisioning executes the process of switching Pool Master with other virtual machine server.

1.7.26. Action for VMS / Move all running VMs on the VM server. (Migration)

Moves a virtual machine running on a target virtual machine server to other virtual machine server.

As the moving method, Migration is used.

This action is only valid for events detected on virtual machine servers.

In addition, if the target virtual machine server is Pool Master of XenServer and the machine is stopped, SystemProvisioning executes the process of switching Pool Master with other virtual machine server.

1.7.27. Action for VMS / Move all running VMs on the VM server. (Migration, Failover)

Moves a virtual machine running on a target virtual machine server to other virtual machine server.

As the moving method, Migration is used. If Migration fails, Failover is used.

This action is only valid for events detected on virtual machine servers.

In addition, if the target virtual machine server is Pool Master of XenServer and the machine is stopped, SystemProvisioning executes the process of switching Pool Master with other virtual machine server.

1.7.28. Action for VMS / Move all VMs on the VM server. (Failover)

Moves all virtual machines on a target virtual machine server to other virtual machine server.

As the moving method, Failover is used.

This action is only valid for events detected on virtual machine servers.

In addition, if the target virtual machine server is Pool Master of XenServer and the machine is stopped, SystemProvisioning executes the process of switching Pool Master with other virtual machine server.

1.7.29. Action for VMS / Move all VMs on the VM server. (Migration)

Moves all virtual machines on a target virtual machine server to other virtual machine server.

As the moving method, Migration is used.

This action is only valid for events detected on virtual machine servers.

In addition, if the target virtual machine server is Pool Master of XenServer and the machine is stopped, SystemProvisioning executes the process of switching Pool Master with other virtual machine server.

1.7.30. Action for VMS / Move all VMs on the VM server. (Migration, Failover)

Moves all virtual machines on a target virtual machine server to other virtual machine server.

As the moving method, Migration is used. If Migration fails, Failover is used.

This action is only valid for events detected on virtual machine servers.

In addition, if the target virtual machine server is Pool Master of XenServer and the machine is stopped, SystemProvisioning executes the process of switching Pool Master with other virtual machine server.

1.7.31. Action for VMS / Move all VMs on the VM Server. (Quick Migration, Failover)

Moves all virtual machines on a target virtual machine server to another virtual machine server.

As the moving method, Quick Migration is used. If Quick Migration fails, Failover is used.

This action is only valid for events detected on virtual machine servers.

In addition, if the target virtual machine server is Pool Master of XenServer and the machine is stopped, SystemProvisioning executes the process of switching Pool Master with another virtual machine server.

1.7.32. Action for VMS / Power Save VM server

Relocates a virtual machine on a virtual machine server, *Move Virtual Machine*, according to the load status (low load) of the virtual machine server.

If a running virtual machine no longer exists after the relocation, stops the virtual machine server to save power.

This action is implemented as an Optimized Placement action for the detected low load of virtual machine server event (Report Source: SystemMonitorPerf, and Event ID: 11000007).

1.7.33. Action for VMS / Load Balance VM server

Relocates a virtual machine on a virtual machine server, *Move Virtual Machine*, according to the load status (high load) of the virtual machine server to alleviate the load.

If SystemProvisioning concludes that the load is not alleviated only with the running virtual machine server, SystemProvisioning starts a stopped virtual machine server to allocate virtual machines.

This action is implemented as an Optimized Placement action for the detected high load of virtual machine server event (Report Source: SystemMonitorPerf, and Event ID: 11000006).

1.7.34. Action for VMS / Apply VM Optimized Placement Rule

Relocates virtual machines running on a target virtual machine server according to the Optimized Placement Rule.

The target of this relocating is virtual machines which exists in another virtual machine server and is pinned to the target virtual machine server, and also a virtual machine which exists in the target virtual machine server and does not satisfy the Optimized Placement Rule.

This action does not execute any operations for virtual machines to which the Optimized Placement Rule is not set.

1.7.35. Action for VMS / Shutdown VM Server(Predictive)

Shut down the target virtual machine server.

However, if SystemProvisioning action judges that stopping the target virtual machine is likely to cause a problem in management and control of SystemProvisioning, this action is not executed. (For example, a target virtual machine server is Pool Master of XenServer.)

1.7.36. Execute Local Script

Executes a local script to a corresponding machine or group.

A local script which will be executed with this action can be specified on the Action Parameter Settings window. For how to set the setting, see Subsection 4.10.6, "Configuring Event Handler Settings of a Policy Monitoring Event" in *SigmaSystemCenter Configuration Guide*.

If you changed the local script name itself, specify its parameter (script file name) on the Action Parameter Settings window again.

1.7.37. Reset of an Action Execution Result

Even when actions which have been executed until this action actually end abnormally, this action does not reflect such results to the execution results of the jobs.

Combine the execution result of an action, "Failed", to use this action.

2. Logs

This chapter explains the logs that SigmaSystemCenter outputs.

This chapter contains the following sections:

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- 2.2 Event Logs 121
- 2.3 List of Log Files 167

2.1. Types of Logs

There are the following logs that SystemProvisioning outputs:

- Operations Log

  The operational situation of SystemProvisioning is recorded.

  You can see the Operations Log on the Operations Log window in the Monitor view.

  The operations log displayed on this window is stored in the database. If the number of logs exceeds the maximum output number, logs are deleted from the oldest one.

  In addition, you can output the logs in csv using the ssc command.

- Event Log

  You can check the event logs on Application on the Event Viewer.

- Debug Log

  SystemProvisioning outputs debug logs for failure analysis into a file. For the list of debug logs, see Section 2.3, "List of Log Files."

2.2. Event Logs

This section provides the lists of Event logs of SystemProvisioning are related to the operation in SigmaSystemCenter.

Reference: For the Event logs of System Monitor - Performance Monitoring Services, see Section 9.1, "The Event Log" in *System Monitor - Performance Monitoring Services User's Guide*.

The events in this section can be checked on Application on the Event Viewer started by clicking the Start menu, clicking Control Panel, double-clicking Administrative Tools from Control Panel, and double-clicking Event Viewer.

2.2.1. Event Logs of SystemProvisioning

The followings are the event logs of SystemProvisioning. The event source name is PVM.

Event ID	Description	Type	Meanings	Solution
101	The PVM service started.	Information	The PVM Service is started.	Nothing
102	Failed to start the PVM service.(Content: Failed to start["information"]) Failed to start the PVM service. (Content: Failed to start)	Error	An error occurred when starting the PVM Service. "Information": A module name that failed to start.	Collect a log and restart the service.
105	Stopping the PVM operation.	Error	An error occurred when stopping the PVM Service.	Collect a log.
106	Terminates the PVM service by the stop operation	Information	The PVM Service is stopped by a stop operation.	Nothing
107	Product License expires in "number of remaining days" day(s).	Information	The product license that you are using is for evaluation and it is going to be expired in a week.	Update the license to a full support version.
107	Product License has expired.	Information	The product license for evaluation has expired.	Update the license to a full support version.

Event ID	Description	Type	Meanings	Solution
150	Transaction log of configuration database exceeded file size("file size"). (FileName:"file name")	Information	Transaction log expands.	The transaction log might degrades the system performance use almost all the disk space. Stop SystemProvisioning and shrink the transaction log.
502 *1	Received a notification. ("information")	Information	Received notification of an action of the policy that contains "Notification/ E-mail, Event Log." "Information": Description of the notification	Nothing
502 *1	found manager event event number:"EventID" manager name:"Manager Name" event message:"Information"	Information	(Notification of monitoring such as a disk capacity detected by Manager) "EventID" : event number "Manager Name" : manager name "Information" : Event message	Nothing
502 *1	The action ("information") was started. Management ID:"Management ID"	Information	Started an action of the policy that contains "Notification/ E-mail, Event Log." "Information": Information of the action "Management ID": The management number of the action	Nothing
502 *1	The action ("information") has been completed. Management ID:"Management ID"	Information	Completed an action of the policy that contains "Notification/ E-mail, Event Log." "Information": Information of the action "Management ID": The management number of the action	Nothing
502 *1	The action ("information") was terminated because an error occurred. Management ID:"Management ID"	Information	Failed to run an action of the policy that contains "Notification/ E-mail, Event Log." "Information": Information of the action "Management ID": The management number of the action	Nothing

Event ID	Description	Type	Meanings	Solution
502 *1	The action ("information") has been canceled. Management ID:"Management ID"	Information	An action of the policy that contains "Notification/ E-mail, Event Log" is canceled. "Information": Information of the action "Management ID": The management number of the action	Nothing
510	An event was detected. Target is "Target" Event is "Event Message" ---------- * Additional information. (see the table below this table.)	Information	Information level detection occurred at the target machine. *2	Nothing
511	An event was detected. Target is "Target" Event is "Event Message" ---------- * Additional information. (see the table below this table.)	Warning	Warning level detection occurred at the target machine. *2	Nothing
512	An event was detected. Target is "Target" Event is "Event Message" ---------- * Additional information. (see the table below this table.)	Warning	Error level detection occurred at the target machine. *2	Nothing
520	An event was detected. Target is "Target" Event is "Event Message" ---------- * Additional information. (see the table below this table.)	Information	Information level detection occurred at the target VM. (Not registered by default.)	Nothing
521	An event was detected. Target is "Target" Event is "Event Message" ---------- * Additional information. (see the table below this table.)	Warning	Warning level detection occurred at the target VM. (Not registered by default.)	Nothing
522	An event was detected. Target is "Target" Event is "Event Message" ---------- * Additional information. (see the table below this table.)	Warning	Error level detection occurred at the target VM. (Not registered by default.)	Nothing

Event ID	Description	Type	Meanings	Solution
530	Received a notification. ("Event Message" : "Target") ---------- * Additional information. (see the table below this table.)	Information	Information detection, such as normalization set to be monitored in a policy, occurred at the target machine.	Nothing
531	Received a notification. ("Event Message" : "Target") ---------- * Additional information. (see the table below this table.)	Warning	Warning level detection set to be monitored in a policy occurred at the target machine.	Nothing
532	Received a notification. ("Event Message" : "Target") ---------- * Additional information. (see the table below this table.)	Warning	Error level detection, such as normalization set to be monitored in a policy, occurred at the target machine.	Nothing
536	found manager event event number:"Event ID" manager name:"Manager Name" event message:"Event Message" ---------- * Additional information. (see the table below this table.)	Information	Information detection, such as normalization set to be monitored in a policy, occurred at the manager.	Nothing
537	found manager event event number:"Event ID" manager name:"Manager Name" event message:"Event Message" ---------- * Additional information. (see the table below this table.)	Warning	Warning level detection set to be monitored in a policy occurred at the manager. (Not registered by default.)	Nothing
538	found manager event event number:"Event ID" manager name:"Manager Name" event message:"Event Message" ---------- * Additional information. (see the table below this table.)	Warning	Warning level detection set to be monitored in a policy occurred at the manager. (Not registered by default.)	Nothing
540	The action ("Infomation") was started. Management ID:"Management ID" ---------- * Additional information (see below)	Information	An action as an autonomous control is executed. "Information": information of the action "Management ID": Management ID of the action	Nothing

Event ID	Description	Type	Meanings	Solution
541	The action ("Infomation") has been completed.Management ID:"Management ID" ---------- * Additional information. (see the table below this table.)	Information	An action as an autonomous control ends successfully. "Information": information of the action "Management ID": Management ID of the action	Nothing
542	The action ("Infomation") was terminated because an error occurred.Management ID:"Management ID" ---------- * Additional information. (see the table below this table.)	Warning	An action as an autonomous control ends abnormally. "Information": information of the action "Management ID": Management ID of the action	Nothing
543	The action ("Infomation") has been canceled. Management ID:"Management ID" ---------- * Additional information. (see the table below this table.)	Information	An action as an autonomous control is cancelled. "Information": information of the action "Management ID": Management ID of the action	Nothing
2000	An exception occurred in the action sequence execution management. Description="description"	Error	An internal error occurred in the action sequence execution management process.	Reading a registry may have failed. Check if the product is installed properly.
2010	Could not load the action sequence module that failed to register parts. Parts name="part name" Cause="cause"	Error	An internal error occurred in the action sequence execution management process.	The process of starting the service may have failed. Check if the product is installed properly.
2012	Failed to read the action sequence file. Cannot execute action sequence. Action sequence name:"name" Cause="cause"	Error	Cannot execute an action sequence because the system cannot find the action sequence.	The action sequence file does not exist. Check if the file is in a folder *SystemProvisioning installation path*\ActionSequence.
2021	Started the action starting up the machine. Management ID:"Management ID" Machine to be started up.("machine name")	Information	Starts a machine.	Nothing
2022	Completed the action starting up the machine. Management ID:"Management ID" Machine to be started up.("machine name")	Information	Completed starting a machine.	Nothing

Event ID	Description	Type	Meanings	Solution
2023	Aborted the action starting up the machine. Management ID:"Management ID" Machine to be started up.("machine name")	Warning	Failed to start a machine.	The process of starting the machine has failed. Check the cause in the SystemProvisioning log, remove the cause, and execute the process again.
2024	Canceled the action starting up the machine. Management ID:"Management ID" Machine to be started up.("machine name")	Information	Starting a machine is canceled.	Nothing
2025	Started the action shutting down the machine. Management ID:"Management ID" Machine to be shut down.("machine name")	Information	Shuts down a machine.	Nothing
2026	Completed the action shutting down the machine. Management ID:"Management ID" Machine to be shut down.("machine name")	Information	Shutting down a machine completed.	Nothing
2027	Aborted the action shutting down the machine. Management ID:"Management ID" Machine to be shut down.("machine name")	Warning	Failed to shut down a machine.	The process of shutting down the machine has failed. Check the cause in the SystemProvisioning log, remove the cause, and execute the process again.
2028	Canceled the action shutting down the machine. Management ID:"Management ID" Machine to be shut down.("machine name")	Information	Shutting down a machine is canceled.	Nothing
2029	Started the action rebooting the machine. Management ID:"Management ID" The rebooting machine.("machine name")	Information	Restarts a machine.	Nothing
2030	Completed the action rebooting the machine. Management ID:"Management ID" The rebooting machine.("machine name")	Information	Completed restarting a machine.	Nothing
2031	Aborted the action rebooting the machine. Management ID:"Management ID" The rebooting machine.("machine name")	Warning	Failed to restart a machine.	The process of restarting the machine has failed. Check the cause in the SystemProvisioning log, remove the cause, and execute the process again.
2032	Canceled the action rebooting the machine. Management ID:"Management ID" The rebooting machine.("machine name")	Information	Restarting a machine is canceled.	Nothing

Event ID	Description	Type	Meanings	Solution
2033	Started the action adding the machine to the group. Management ID:"Management ID" The machine which is waiting to the pool of a group.("machine name") The group which works a machine.("group name")	Information	Adds a machine to a group and start the machine.	Nothing
2034	Completed the action adding the machine to the group. Management ID:"Management ID" The machine which is waiting to the pool of a group.("machine name")	Information	Completed a process of adding a machine to a group.	Nothing
2035	Aborted the action adding the machine to the group. Management ID:"Management ID" The machine which is waiting to the pool of a group.("machine name") The group which works a machine.("group name")	Warning	Failed to add a machine to a group.	Activating the machine in the group has failed. Check the cause in the SystemProvisioning log, remove the cause, and execute the process again. If a machine with the status displayed as Error in the group, delete the machine from the group, remove the cause of the error, and then, register the machine to the group again.
2036	Canceled the action adding the machine to the group. Management ID:"Management ID" The machine which is waiting to the pool of a group.("machine name")	Information	Adding a machine to a group Is canceled.	Nothing
2037	Started the action removing a running machine from the group. Management ID:"Management ID" Machine to be running in the group.("machine name") The group in which the machine is running.("group name")	Information	Makes a machine running in a group stand by.	Nothing
	Started the action deleting substance of the virtual machine from the group. Management ID:"Management ID" Machine to delete which is running in the group.("machine name") The group in which the machine is running.("group name")	Information	Deletes a machine (virtual machine) running in a group from the group, and delete the resource.	Nothing
2038	Completed the action removing a running machine from the group. Management ID:"Management ID" Machine to be running in the group.("machine name")	Information	Completed a process of making a machine running in a group stand by,	Nothing

Event ID	Description	Type	Meanings	Solution
	Completed the action deleting substance of the virtual machine from the group. Management ID:"Management ID"	Information	Completed a process of deleting a machine (virtual machine) running in a group from the group and deleting the resource.	Nothing
2040	Aborted the action removing a running machine from the group. Management ID:"Management ID"	Warning	Failed to make a machine running in a group stand by,	The process of making the machine running in a group stand by has failed. Check the cause in the SystemProvisioning log, remove the cause, and execute the process again.
	Aborted the action deleting substance of the virtual machine from the group. Management ID:"Management ID"	Warning	Failed to delete a machine (virtual machine) running in a group from the group and deleting the resource.	The process of making the machine running in a group stand by has failed. Check the cause in the SystemProvisioning log, remove the cause, and execute the process again
2041	Canceled the action removing a running machine from the group. Management ID:"Management ID"	Information	Making a machine running in a group stand by is canceled,	Nothing
	Canceled the action deleting substance of the virtual machine from the group. Management ID:"Management ID"	Information	Deleting a machine (virtual machine) running in a group from the group and deleting the resource is canceled.	Nothing
2042	Started the action replacing the specified machine to standby machine. Management ID:"Management ID" Source machine.("machine name")	Information	Replaces a machine running in a group with a stand by machine.	Nothing
2043	Completed the action replacing the specified machine to standby machine. Management ID:"Management ID" Source machine.("machine name") Destination machine.("machine name")	Information	Completed replacing a machine running in a group with a stand by machine.	Nothing

Event ID	Description	Type	Meanings	Solution
2044	Aborted the action replacing the specified machine to standby machine. Management ID:"Management ID" Source machine.("machine name")	Warning	Failed to replace a machine running in a group with a stand by machine.	Replacing a machine running in a group with a stand by machine has failed. Check the cause in the SystemProvisioning log, remove the cause, and execute the process again. If a machine with the status displayed as Error in the group, delete the machine from the group, remove the cause of the error, and then, register the machine to the group again.
2045	Canceled the action replacing the specified machine to standby machine. Management ID:"Management ID" Source machine.("machine name")	Information	Replacing a machine running in a group with a stand by machine is canceled.	Nothing
2050	Started the action changing the use of a machine. Management ID:"Management ID" Use change machine.("machine name") Use change former group.("group name") Use change place group.("group name")	Information	Changes a usage of a machine.	Nothing
2051	Completed the action changing the use of a machine. Management ID:"Management ID" Use change machine.("machine name")	Information	Completed changing a usage of a machine.	Nothing
2052	Aborted the action changing the use of a machine. Management ID:"Management ID"	Warning	Failed to change a usage of a machine.	Changing a usage of the machine running in the group to that of other group has failed. Check the cause in the SystemProvisioning log, remove the cause, and execute the process again. If a machine with the status displayed as Error in the group, delete the machine from the group, remove the cause of the error, and then, register the machine to the group again.
2053	Canceled the action changing the use of a machine. Management ID:"Management ID"	Information	Changing a usage of a machine is canceled.	Nothing

Event ID	Description	Type	Meanings	Solution
2054	Started the action creating a virtual machine and adding it to the group. Management ID:"Management ID" VM to create("machine name") The group which works a machine("group name") The machine definition of VM to create("host name")	Information	Creates a machine in a group,	Nothing
2055	Completed the action creating a virtual machine and adding it to the group. Management ID:"Management ID" the created VM("machine name")	Information	Completed creating a machine in a group.	Nothing
2056	Aborted the action creating a virtual machine and adding it to the group. Management ID:"Management ID" the created VM("machine name")	Warning	Failed to create a machine in a group.	Creating a machine in a group has failed. Check the cause in the SystemProvisioning log, remove the cause, and execute the process again. If a machine with the status displayed as Error in the group, delete the machine from the group, remove the cause of the error, and then, register the machine to the group again.
2057	Canceled the action creating a virtual machine and adding it to the group. Management ID:"Management ID" the created VM("machine name")	Information	Creating a machine in a group is canceled.	Nothing
2062	Started the action Move/Failover VM. Management ID:"Management ID" Target VM.("machine name") Migration/QuickMigration.("True" or "False") Move. ("True" or "False") Failover. ("True" or "False")	Information	Moves a virtual machine in a group. You can execute this process only for a virtual machine.	Nothing
2063	Completed the action Move/Failover VM. Management ID:"Management ID" VM for movement.("machine name")	Information	Completed moving a virtual machine in a group. You can execute this process only for a virtual machine.	Nothing
2064	Aborted the action Move/Failover VM. Management ID:"Management ID"	Warning	Failed to move a virtual machine in a group. You can execute this process only for a virtual machine.	Moving a virtual machine in a group has failed. Check the cause in the SystemProvisioning log, remove the cause, and execute the process again.
2065	Canceled the action Move/Failover VM. Management ID:"Management ID"	Information	Moving a virtual machine in a group is canceled. You can execute this process only for a virtual machine.	Nothing

Event ID	Description	Type	Meanings	Solution
2066	Started the action Move/Failover VMs on the specified VM Server. Management ID:"Management ID" Source VM Server.("machine name") Migration/QuickMigration.("True" or "False") Move. ("True" or "False") Failover. ("True" or "False")	Information	Execute Move or Failover a virtual machine on a virtual machine server.	Nothing
2067	Completed the action Move/Failover VMs on the specified VM Server. Management ID:"Management ID" Source VM Server.("machine name")	Information	Completed Move or Failover a virtual machine on a virtual machine server.	Nothing
2068	Aborted the action Move/Failover VMs on the specified VM Server. Management ID:"Management ID" Source VM Server.("machine name")	Warning	Failed to Move or Failover a virtual machine on a virtual machine server.	Moving a virtual machine in a group has failed. Check the cause in the SystemProvisioning log, remove the cause, and execute the process again.
2069	Move/Failover VMs on the specified VM Server. Management ID:"Management ID" Source VM Server.("machine name")	Information	Move or Failover a virtual machine on a virtual machine server is canceled.	Nothing
2070	Started the action distributing software to the machine. Management ID:"Management ID" Machine to distribute a software.("machine name")	Information	Distributes software to a machine.	Nothing
2071	Completed the action distributing software to the machine. Management ID:"Management ID"	Information	Completed distributing software to a machine.	Nothing
2072	Aborted the action distributing software to the machine. Management ID:"Management ID"	Warning	Failed to distribute software to a machine.	Distributing software to a machine has failed. Check the cause in the SystemProvisioning log, remove the cause, and execute the process again.
2073	Canceled the action distributing software to the machine. Management ID:"Management ID"	Information	Distributing software to a machine is canceled.	Nothing
2074	Started the action distributing software to all machines in the group. Management ID:"Management ID" Group to distribute a software.("group name")	Information	Distributes software to all machines in a group.	Nothing
2075	Completed the action distributing software to all machines in the group. Management ID:"Management ID" Group to distribute a software.("group name")	Information	Completed distributing software to all machines in a group.	Nothing

Event ID	Description	Type	Meanings	Solution
2076	Aborted the action distributing software to all machines in the group. Management ID:"Management ID" Group to distribute a software.("group name")	Warning	Failed to distribute software to all machines in a group.	Distributing software to all machines in a group has failed. Check the cause in the SystemProvisioning log, remove the cause, and execute the process again.
2077	Canceled the action distributing software to all machines in the group. Management ID:"Management ID" Group to distribute a software.("group name")	Information	Distributing software to all machines in a group is canceled.	Nothing
2079	The number of NICs ("number of NICs") physically implemented to machine ("machine name") and the number of NICs ("number of NICs") in the host setting ("host name") do not match. Confirm your host setting.	Warning	The number of NICs on a machine and that of the Host Setting are different.	Check if the number of NICs on a machine is different from the number of NICs on the Host Setting.
2080	Started the action suspending the machine. Management ID:"Management ID" The machine to suspend.("machine name")	Information	Suspends a machine.	Nothing
2081	Completed the action suspending the machine. Management ID:"Management ID" The machine to suspend.("machine name")	Information	Completed suspending a machine.	Nothing
2082	Aborted the action suspending the machine. Management ID:"Management ID" The machine to suspend.("machine name")	Warning	Failed to suspend a machine.	A process of suspending the machine has failed. Check the cause in the SystemProvisioning log, remove the cause, and execute the process again.
2083	Canceled the action suspending the machine. Management ID:"Management ID" The machine to suspend.("machine name")	Information	Suspending a machine is canceled.	Nothing
2085	Failed to update status of the Machine("machine name").	Information	A machine which status is used is found when checking the information of starting the service.	(If an action regarding the machine was being executed at the time, this message is not an error.)
2086	Started the action Power on the machine. Management ID:"Management ID" Machine to be power on.("machine name")	Information	Powers on a machine.	Nothing
2087	Completed the action Power on the machine. Management ID:"Management ID" Machine to be power on.("machine name")	Information	Completed powering ON a machine.	Nothing

Event ID	Description	Type	Meanings	Solution
2088	Aborted the action Power on the machine. Management ID:"Management ID" Machine to be power on.("machine name")	Warning	Failed to power ON a machine.	A process of powering ON the machine has failed. Check the cause in the SystemProvisioning log, remove the cause, and execute the process again.
2089	Canceled the action Power on the machine. Management ID:"Management ID" Machine to be power on.("machine name")	Information	Powering ON a machine is canceled.	Nothing
2090	Started the action Power off the machine. Management ID:"Management ID" Machine to be power off.("machine name")	Information	Powers OFF a machine.	Nothing
2091	Completed the action Power off the machine. Management ID:"Management ID" Machine to be power off.("machine name")	Information	Completed powering OFF a machine.	Nothing
2092	Aborted the action Power off the machine. Management ID:"Management ID" Machine to be power off.("machine name")	Warning	Failed to power OFF a machine.	A process of powering OFF the machine has failed. Check the cause in the SystemProvisioning log, remove the cause, and execute the process again.
2093	Canceled the action Power off the machine. Management ID:"Management ID" Machine to be power off.("machine name")	Information	Powering OFF a machine is canceled.	Nothing
2094	Started the action resetting the machine. Management ID:"Management ID" The resetting machine.("machine name")	Information	Resets a machine.	Nothing
2095	Completed the action resetting the machine. Management ID:"Management ID" The resetting machine.("machine name")	Information	Completed resetting a machine.	Nothing
2096	Aborted the action resetting the machine. Management ID:"Management ID" The resetting machine.("machine name")	Warning	Failed to reset a machine.	A process of resetting the machine has failed. Check the cause in the SystemProvisioning log, remove the cause, and execute the process again.
2097	Canceled the action resetting the machine. Management ID:"Management ID" The resetting machine.("machine name")	Information	Resetting a machine is canceled.	Nothing

Event ID	Description	Type	Meanings	Solution
2098	Started the action Diagnose the machine. Management ID:"Management ID" Machine to be Investigated.("machine name")	Information	Diagnoses a machine.	Nothing
2099	Completed the action Diagnose the machine. Management ID:"Management ID"	Information	Completed diagnosis.	Nothing
2100	Aborted the action Diagnose the machine. Management ID:"Management ID"	Warning	Failed to diagnose a machine.	A process of investigating the machine has failed. Check the cause in the SystemProvisioning log, remove the cause, and execute the process again.
2101	Canceled the action Diagnose the machine. Management ID:"Management ID"	Information	Investigating a machine is canceled.	Nothing
2102	Started the action Diagnose the machine by Type. Management ID:"Management ID" Machine to be Investigated.("machine name") Diagnosis type.("Type")	Information	Sensor diagnosis is started.	Nothing
2103	Completed the action Diagnose the machine by Type. Management ID:"Management ID" Machine to be Investigated.("machine name") (true)	Information	Sensor diagnosis is completed. An error state was detected. The state is diagnosed as "faulted status".	Nothing
2104	Aborted the action Diagnose the machine by Type. Management ID:"Management ID" Machine to be Investigated.("machine name")	Warning	Sensor diagnosis is completed. Any errors were not investigated in all the sensors or the sensor event occurred. A process of investigating the hardware sensor status is canceled.	Nothing
2105	Canceled the action Diagnose the machine by Type. Management ID:"Management ID" Machine to be Investigated.("machine name")	Information	Sensor diagnosis is canceled.	Nothing
2106	Started the action Power cycle the machine. Management ID:"Management ID" Machine to be powercycled.("machine name")	Information	Power cycle of the machine is started.	Nothing
2107	Completed the action Power cycle the machine. Management ID:"Management ID" Machine to be powercycled.("machine name")	Information	Power cycle of the machine is completed.	Nothing

Event ID	Description	Type	Meanings	Solution
2108	Aborted the action Power cycle the machine. Management ID:"Management ID" Machine to be powercycled.("machine name")	Warning	Power cycle of the machine is aborted.	A process of Power cycle of the machine has failed. Check the cause in the SystemProvisioning log, remove the cause, and execute the process again.
2109	Canceled the action Power cycle the machine. Management ID:"Management ID" Machine to be powercycled.("machine name")	Information	Power cycle of the machine is canceled.	Nothing
2110	Started the action Dump the machine. Management ID:"Management ID" Machine to be dumped.("machine name")	Information	Dumping of the machine is started.	Nothing
2111	Completed the action Dump the machine. Management ID:"Management ID" Machine to be dumped.("machine name")	Information	Dumping of the machine is completed.	Nothing
2112	Aborted the action Dump the machine. Management ID:"Management ID" Machine to be dumped.("machine name")	Warning	Dumping of the machine is failed.	A process of dump the machine has failed. Check the cause in the SystemProvisioning log, remove the cause, and execute the process again.
2113	Canceled the action Dump the machine. Management ID:"Management ID" Machine to be dumped.("machine name")	Information	Dumping of the machine is canceled.	Nothing
2114	Started the action AcpiShutdown the machine. Management ID:"Management ID" Machine to be acpishutdown.("machine name")	Information	AcpiShutdown of the machine is started.	Nothing
2115	Completed the action AcpiShutdown the machine. Management ID:"Management ID" Machine to be acpishutdown.("machine name")	Information	AcpiShutdown of the machine is completed.	Nothing
2116	Aborted the action AcpiShutdown the machine. Management ID:"Management ID" Machine to be acpishutdown.("machine name")	Warning	AcpiShutdown of the machine is failed.	A process of AcpiShutdown of the machine has failed. Check the cause in the SystemProvisioning log, remove the cause, and execute the process again.
2117	Canceled the action AcpiShutdown the machine. Management ID:"Management ID" Machine to be acpishutdown.("machine name")	Information	AcpiShutdown of the machine is canceled.	Nothing

Event ID	Description	Type	Meanings	Solution
2118	Started the action Turn on the LED of machine. Management ID:"Management ID" Machine to turn on LED.("machine name")	Information	Turning on the LED of the machine is started.	Nothing
2119	Completed the action Turn on the LED of machine. Management ID:"Management ID" Machine to turn on LED.("machine name")	Information	Turning on the LED of the machine is completed.	Nothing
2120	Aborted the action Turn on the LED of machine. Management ID:"Management ID" Machine to turn on LED.("machine name")	Warning	Turning on the LED of the machine is Failed.	A process of tuning on the LED of the machine has failed. Check the cause in the SystemProvisioning log, remove the cause, and execute the process again.
2121	Canceled the action Turn on the LED of machine. Management ID:"Management ID" Machine to turn on LED.("machine name")	Information	Turning on the LED of the machine is canceled.	Nothing
2122	Started the action Turn off the LED of machine. Management ID:"Management ID" Machine to turn off LED.("machine name")	Information	Turning off the LED of the machine is started.	Nothing
2123	Completed the action Turn off the LED of machine. Management ID:"Management ID" Machine to turn off LED.("machine name")	Information	Turning off the LED of the machine is completed.	Nothing
2124	Aborted the action Turn off the LED of machine. Management ID:"Management ID" Machine to turn off LED.("machine name")	Warning	Turning off the LED of the machine is failed.	A process of tuning on the LED of the machine has failed. Check the cause in the SystemProvisioning log, remove the cause, and execute the process again.
2125	Canceled the action Turn off the LED of machine. Management ID:"Management ID" Machine to turn off LED.("machine name")	Information	Turning off the LED of the machine is canceled.	Nothing
2126	Started the action Execute Load Balancing for VM Server. ID:"Management ID" Target VM Server.("machine name")	Information	Load balancing for VM Server is started.	Nothing
2127	Completed the action Execute Load Balancing for VM Server. ID:"Management ID" Target VM Server.("machine name")	Information	Load balancing for VM Server is completed.	Nothing
2128	Aborted the action Execute Load Balancing for VM Server. ID:"Management ID" Target VM Server.("machine name")	Warning	Load balancing for VM Server is failed.	Check the cause in the SystemProvisioning log, remove the cause.

Event ID	Description	Type	Meanings	Solution
2129	Canceled the action Execute Load Balancing for VM Server. ID:"Management ID" Target VM Server.("machine name")	Information	Load balancing for VM Server is canceled.	Nothing
2130	Started the action Execute Power Saving for VM Server ID:"Management ID" Target VM Server.("machine name")	Information	Power saving for VM Server is started.	Nothing
2131	Completed the action Execute Power Saving for VM Server ID:"Management ID" Target VM Server.("machine name")	Information	Power saving for VM Server is completed.	Nothing
2132	Aborted the action Execute Power Saving for VM Server ID:"Management ID" Target VM Server.("machine name")	Warning	Power saving for VM Server is failed.	Check the cause in the SystemProvisioning log, remove the cause.
2133	Canceled the action Execute Power Saving for VM Server ID:"Management ID" Target VM Server.("machine name")	Information	Power saving for VM Server is canceled.	Nothing
2134	Started the action Apply VM Optimized Placement Rule ID:"Management ID" Target Group.("group name") Target VM Server.("host name")	Information	Apply VM Optimized Placement Rule is started.	Nothing
2135	Completed the action Apply VM Optimized Placement Rule ID:"Management ID" Target Group.("group name") Target VM Server.("host name")	Information	Apply VM Optimized Placement Rule is completed.	Nothing
2136	Aborted the action Apply VM Optimized Placement Rule ID:"Management ID" Target Group.("group name") Target VM Server.("host name")	Warning	Apply VM Optimized Placement Rule is failed.	Check the cause in the SystemProvisioning log, remove the cause, and execute the process again.
2137	Canceled the action Apply VM Optimized Placement Rule ID:"Management ID" Target Group.("group name") Target VM Server.("host name")	Information	Apply VM Optimized Placement Rule is canceled.	Nothing
2138	Started the action Composite diagnosis and setting ready status ID:"Management ID" Machine to be diagnosed.("machine name") Diagnosis Action type.(RecoverCheck)	Information	Recover diagnosis is started.	Nothing
2139	Completed the action Composite diagnosis and setting ready status ID:"Management ID" Machine to be diagnosed.("machine name") Diagnosis result.(True)	Information	Recover diagnosis is completed.	Nothing

Event ID	Description	Type	Meanings	Solution
2140	Aborted the action Composite diagnosis and setting ready status ID:"Management ID" Machine to be diagnosed.("machine name") Diagnosis result.(False)	Warning	Recover diagnosis is failed.	Check the cause in the SystemProvisioning log, remove the cause, and execute the process again.
2141	Canceled the action Composite diagnosis and setting ready status ID:"Management ID" Machine to be diagnosed.("machine name")	Information	Recover diagnosis is canceled.	Nothing
2142	Started the action shutting down (predictive) for VM Server ID:"Management ID" Target VM Server.("host name")	Information	Shutting down a VM Server is started.	Nothing
2143	Completed the action shutting down (predictive) for VM Server ID:"Management ID" Target VM Server.("host name")	Information	Shutting down a VM Server is completed.	Nothing
2144	Aborted the action shutting down (predictive) for VM Server ID:"Management ID" Target VM Server.("host name")	Warning	Shutting down a VM Server failed.	Check the cause in the SystemProvisioning log, remove the cause.
2145	Canceled the action shutting down (predictive) for VM Server ID:"Management ID" Target VM Server.("host name")	Information	Shutting down a VM Server is canceled.	Nothing
2146	Started the action refilling reserved VM Server ID:"Management ID" Target Group.("group name")	Information	Refilling reserved VM Server is started.	Nothing
2147	Completed the action refilling reserved VM Server ID:"Management ID" Target Group.("group name")	Information	Refilling reserved VM Server is completed.	Nothing
2148	Aborted the action refilling reserved VM Server ID:"Management ID" Target Group.("group name")	Warning	Refilling reserved VM Server failed.	Check the cause in the SystemProvisioning log, remove the cause.
2149	Canceled the action refilling reserved VM Server ID:"Management ID" Target Group.("group name")	Information	Refilling reserved VM Server is canceled.	Nothing
2500	Software ("software name") will be distributed to machine "machine name".	Information	Distributes software to a machine.	Nothing
2501	Failed to distribute software ("software name") to the machine ("machine name").	Error	Failed to distribute software to a machine.	Distributing software to a machine has failed. Check the cause in the log, remove the cause, and execute the process again.

Event ID	Description	Type	Meanings	Solution
2502	Software ("software name") has been distributed to machine ("machine name").	Information	Completed distributing software to a machine.	Nothing
2652	VLAN ("VLAN name","port name") of switch ("switch name") could not be created.	Error	Failed to create a VLAN of a switch.	Creating a VLAN of a switch has failed. Check the cause in the log, remove the cause, and execute the process again.
2655	VLAN ("VLAN name") of switch ("switch name") could not be removed.	Error	Failed to delete a VLAN of a switch,	Deleting a VLAN of a switch has failed. Check the cause in the log, remove the cause, and execute the process again.
2658	Port ("port name") could not be registered to VLAN ("VLAN name") of switch ("switch name").	Error	Failed to register a port to a VLAN of a switch.	Registering a port to a VLAN of a switch has failed. Check the cause in the log, remove the cause, and execute the process again.
2659	Failed to remove port ("port name") from VLAN ("VLAN name") because it cannot connect to switch ("switch name").	Error	Failed to remove a port from a VLAN of a switch,	Removing a port from a VLAN of a switch has failed. Check the cause in the log, remove the cause, and execute the process again.
2666	VLAN ("VLAN name","port name") of switch ("switch name") was created.	Information	Succeeded in creating a VLAN of a switch,	Nothing
2667	VLAN ("VLAN name") of switch ("switch name") is not found.	Information	There is no VLAN of a switch,	Nothing
2668	VLAN ("VLAN name") of switch ("switch name") was removed.	Information	Succeeded in deleting a VLAN of a switch,	Nothing
2670	Port ("port name") was registered to VLAN ("VLAN name") of switch ("switch name").	Information	Succeeded in registering a port to a VLAN of a switch,	Nothing
2671	Port ("port name") was removed from VLAN ("VLAN name") of switch ("switch name").	Information	Succeeded in removing a port from a VLAN of a switch,	Nothing
2700	Startup for VM Server ("machine name") was started. ID:"Management ID"	Information	Starting up a VM Server for Optimized Placement or the action of Refilling reserved VM Server was started.	Nothing
2701	Startup for VM Server ("machine name") was finished. ID:"Management ID"	Information	Starting up a VM Server for Optimized Placement or the action of Refilling reserved VM Server was finished.	Nothing

Event ID	Description	Type	Meanings	Solution
2702	Startup for VM Server ("machine name") failed. ID:"Management ID"	Warning	Starting up a VM Server for Optimized Placement or the action of Refilling reserved VM Server failed.	Check the cause in the SystemProvisioning log, remove the cause.
2703	Shutdown for VM Server ("machine name") was started. ID:"Management ID"	Information	Shutting down a VM Server for Optimized Placement or the action of shutting down (predictive) for VM Server was started.	Nothing
2704	Shutdown for VM Server ("machine name") was finished. ID:"Management ID"	Information	Shutting down a VM Server for Optimized Placement or the action of shutting down (predictive) for VM Server was finished.	Nothing
2705	Shutdown for VM Server ("machine name") failed. ID:"Management ID"	Warning	Shutting down a VM Server for Optimized Placement or the action of shutting down (predictive) for VM Server failed.	Check the cause in the SystemProvisioning log, remove the cause.
2707	Either of the following messages is displayed: ▪ Preparing failover for VM Server ("machine name") was started. ID:"Management ID" ▪ Replacing master for VM Server(from ("host name") to ("host name")) was started. ID:"Management ID"	Information	Preparing failover (or Replacing master) for VM Server was started.	Nothing
2708	Either of the following messages is displayed: ▪ Preparing failover for VM Server ("machine name") was finished. ID:"Management ID" ▪ Replacing master for VM Server(from ("host name") to ("host name")) was finished. ID:"Management ID"	Information	Preparing failover (or Replacing master) for VM Server was finished.	Nothing
2709	Either of the following messages is displayed: ▪ Preparing failover for VM Server ("machine name") failed. ID:"Management ID" ▪ Replacing master for VM Server(from ("host name") to ("host name")) failed. ID:"Management ID"	Warning	Preparing failover (or Replacing master) for VM Server failed.	Check the cause in the SystemProvisioning log, remove the cause.
2720	*3	Information	Information of the action of Load Balancing for VM Server.	Nothing

Event ID	Description	Type	Meanings	Solution
2721	*3 ▪ There is no suitable VM server as migration target. ID:"Management ID" ▪ Load balancing is skipped because the master ("machine name") is not active.	Warning	Warning of the action of Load Balancing for VM Server.	Check the cause in the SystemProvisioning log, remove the cause.
2722	*3	Information	Information of the action of Power Saving for VM Server.	Nothing
2724	*3	Information	Information of the action of Move all (running) VMs on the VM server.	Nothing
2726	*3	Information	Information of the action of Refilling reserved VM Server.	Nothing
2727	Target group ("group name") is not VM Server group. ID:"Management ID"	Warning	The action of Refilling reserved VM Server was executed for Physical/VM group.	The action of Refilling reserved VM Server is not applicable to Physical/VM group. Check the policy settings.
2728	*3	Information	Information of the action of Shutting Down (predictive) for VM Server.	Nothing
2729	Shutdown is not allowed for VM Server ("machine name"). ID:"Management ID"	Warning	If target VM Server is shutting down, the problem will occur in management of SigmaSystemCenter.	Check the trouble of target VM Server, and remove the cause of the trouble.
2740	There is conflict in some restrictions. ID:"Management ID"	Warning	There is conflict in some rules for VM Optimized Placement Rule.	Check the VM Optimized Placement Rule. See Subsection 2.11.8, "VM Optimized Placement Rule" in *SigmaSystemCenter Overview Reference Guide.*
2741	Following VMs may be remaining on the VM Server ("host name") : ("machine name1, machine name2, ...") ID:"Management ID"	Warning	Perhaps, some VMs remains on the VM Server for the action of Move all (running) VMs on the VM server.	Check the cause in the SystemProvisioning log, remove the cause.
2800	Start migrating the virtual machine("Machine Name"). ("Migrate Type") ManagementID:"Management ID"	Information	Start migrating the virtual machine.	Nothing
2801	Migrating the virtual machine("Machine Name") to ("Migrate Type") has completed. ManagementID:"Management ID"	Information	Completed migrating the virtual machine.	Nothing

Event ID	Description	Type	Meanings	Solution
2802	Failed to execute "Migrate Type" the virtual machine("Machine Name").	Information	Failed to migrate the virtual machine.	Check the cause in the SystemProvisioning log, remove the cause, and execute the process again
2901	Failed to create the virtual machine. The request for creating the virtual machine failed. Cause:{0}	Error	Failed to create the virtual machine.	An error occurred when creating a virtual machine. Remove the cause of the error and try the operation again.
2903	Failed to delete the virtual machine. The request for deleting the virtual machine failed. Cause:{0}	Error	Failed to delete the virtual machine.	An error occurred when deleting a virtual machine. Remove the cause of the error and try the operation again.
3000	Started the action Add the Datacenter.	Information	Started the action Add the Datacenter.	Nothing
3001	Completed the action Add the Datacenter.	Information	Completed the action Add the Datacenter.	Nothing
3002	Canceled the action Add the Datacenter.	Information	Canceled the action Add the Datacenter.	Nothing
3003	Aborted the action Add the Datacenter.	Warning	Aborted the action Add the Datacenter.	Check the cause in the SystemProvisioning log, remove the cause, and execute the process again.
3004	Started the action Add the disk array.	Information	Started the action Add the disk array.	Nothing
3005	Completed the action Add the disk array.	Information	Completed the action Add the disk array.	Nothing
3006	Canceled the action Add the disk array.	Information	Canceled the action Add the disk array.	Nothing
3007	Aborted the action Add the disk array.	Warning	Aborted the action Add the disk array	Check the cause in the SystemProvisioning log, remove the cause, and execute the process again.
3008	Started the action Register manager.	Information	Started the action Register manager.	Nothing
3009	Completed the action Register manager.	Information	Completed the action Register manager.	Nothing
3010	Canceled the action Register manager.	Information	Canceled the action Register manager.	Nothing

Event ID	Description	Type	Meanings	Solution
3011	Aborted the action Register manager.	Warning	Aborted the action Register manager.	Check the cause in the SystemProvisioning log, remove the cause, and execute the process again.
3012	Started the action Add the virtual machine server.	Information	Started the action Add the virtual machine server.	Nothing
3013	Completed the action Add the virtual machine server.	Information	Completed the action Add the virtual machine server.	Nothing
3014	Canceled the action Add the virtual machine server.	Information	Canceled the action Add the virtual machine server.	Nothing
3015	Aborted the action Add the virtual machine server.	Warning	Aborted the action Add the virtual machine server.	Check the cause in the SystemProvisioning log, remove the cause, and execute the process again.
3016	Started the action Delete SEL records.	Information	Started the action Delete SEL records.	Nothing
3017	Completed the action Delete SEL records.	Information	Completed the action Delete SEL records.	Nothing
3018	Canceled the action Delete SEL records.	Information	Canceled the action Delete SEL records.	Nothing
3019	Aborted the action Delete SEL records.	Warning	Aborted the action Delete SEL records	Check the cause in the SystemProvisioning log, remove the cause, and execute the process again.
3020	Started the action Clone the virtual machine.	Information	Started the action Clone the virtual machine.	Nothing
3021	Completed the action Clone the virtual machine.	Information	Completed the action Clone the virtual machine.	Nothing
3022	Canceled the action Clone the virtual machine.	Information	Canceled the action Clone the virtual machine.	Nothing
3023	Aborted the action Clone the virtual machine.	Warning	Aborted the action Clone the virtual machine.	Check the cause in the SystemProvisioning log, remove the cause, and execute the process again.
3024	Started the action Collect all data.	Information	Started the action Collect all data.	Nothing
3025	Completed the action Collect all data.	Information	Completed the action Collect all data.	Nothing

Event ID	Description	Type	Meanings	Solution
3026	Canceled the action Collect all data.	Information	Canceled the action Collect all data.	Nothing
3027	Aborted the action Collect all data.	Warning	Aborted the action Collect all data.	Check the cause in the SystemProvisioning log, remove the cause, and execute the process again.
3028	Started the action Collect data for group.	Information	Started the action Collect data for group.	Nothing
3029	Completed the action Collect data for group.	Information	Completed the action Collect data for group.	Nothing
3030	Canceled the action Collect data for group.	Information	Canceled the action Collect data for group.	Nothing
3031	Aborted the action Collect data for group.	Warning	Aborted the action Collect data for group.	Check the cause in the SystemProvisioning log, remove the cause, and execute the process again.
3032	Started the action Collect data for load balancer.	Information	Started the action Collect data for load balancer.	Nothing
3033	Completed the action Collect data for load balancer.	Information	Completed the action Collect data for load balancer.	Nothing
3034	Canceled the action Collect data for load balancer.	Information	Canceled the action Collect data for load balancer.	Nothing
3035	Aborted the action Collect data for load balancer.	Warning	Aborted the action Collect data for load balancer.	Check the cause in the SystemProvisioning log, remove the cause, and execute the process again.
3036	Started the action Collect data for manager.	Information	Started the action Collect data for manager.	Nothing
3037	Completed the action Collect data for manager.	Information	Completed the action Collect data for manager.	Nothing
3038	Canceled the action Collect data for manager.	Information	Canceled the action Collect data for manager.	Nothing
3039	Aborted the action Collect data for manager.	Warning	Aborted the action Collect data for manager.	Check the cause in the SystemProvisioning log, remove the cause, and execute the process again.
3040	Started the action Collect the scenario.	Information	Started the action Collect the scenario.	Nothing
3041	Completed the action Collect the scenario.	Information	Completed the action Collect the scenario.	Nothing
3042	Canceled the action Collect the scenario.	Information	Canceled the action Collect the scenario.	Nothing

Event ID	Description	Type	Meanings	Solution
3043	Aborted the action Collect the scenario.	Warning	Aborted the action Collect the scenario.	Check the cause in the SystemProvisioning log, remove the cause, and execute the process again.
3044	Started the action Collect data for storage.	Information	Started the action Collect data for storage.	Nothing
3045	Completed the action Collect data for storage.	Information	Completed the action Collect data for storage.	Nothing
3046	Canceled the action Collect data for storage.	Information	Canceled the action Collect data for storage.	Nothing
3047	Aborted the action Collect data for storage.	Warning	Aborted the action Collect data for storage.	Check the cause in the SystemProvisioning log, remove the cause, and execute the process again.
3048	Started the action Collect data for switch.	Information	Started the action Collect data for switch.	Nothing
3049	Completed the action Collect data for switch.	Information	Completed the action Collect data for switch.	Nothing
3050	Canceled the action Collect data for switch.	Information	Canceled the action Collect data for switch.	Nothing
3051	Aborted the action Collect data for switch.	Warning	Aborted the action Collect data for switch.	Check the cause in the SystemProvisioning log, remove the cause, and execute the process again.
3052	Started the action Connect DiskVolume to machine.	Information	Started the action Connect DiskVolume to machine.	Nothing
3053	Completed the action Connect DiskVolume to machine.	Information	Completed the action Connect DiskVolume to machine.	Nothing
3054	Canceled the action Connect DiskVolume to machine.	Information	Canceled the action Connect DiskVolume to machine.	Nothing
3055	Aborted the action Connect DiskVolume to machine.	Warning	Aborted the action Connect DiskVolume to machine.	Check the cause in the SystemProvisioning log, remove the cause, and execute the process again.
3056	Started the action Connect to the virtual machine server.	Information	Started the action Connect to the virtual machine server.	Nothing
3057	Completed the action Connect to the virtual machine server.	Information	Completed the action Connect to the virtual machine server.	Nothing

Event ID	Description	Type	Meanings	Solution
3058	Canceled the action Connect to the virtual machine server.	Information	Canceled the action Connect to the virtual machine server.	Nothing
3059	Aborted the action Connect to the virtual machine server.	Warning	Aborted the action Connect to the virtual machine server.	Check the cause in the SystemProvisioning log, remove the cause, and execute the process again.
3060	Started the action Copy the virtual machine.	Information	Started the action Copy the virtual machine.	Nothing
3061	Completed the action Copy the virtual machine.	Information	Completed the action Copy the virtual machine.	Nothing
3062	Canceled the action Copy the virtual machine.	Information	Canceled the action Copy the virtual machine.	Nothing
3063	Aborted the action Copy the virtual machine.	Warning	Aborted the action Copy the virtual machine.	Check the cause in the SystemProvisioning log, remove the cause, and execute the process again.
3064	Started the action Create datastore	Information	Started the action Create datastore	Nothing
3065	Completed the action Create datastore	Information	Completed the action Create datastore	Nothing
3066	Canceled the action Create datastore	Information	Canceled the action Create datastore	Nothing
3067	Aborted the action Create datastore	Warning	Aborted the action Create datastore	Check the cause in the SystemProvisioning log, remove the cause, and execute the process again.
3068	Started the action Create VLAN.	Information	Started the action Create VLAN.	Nothing
3069	Completed the action Create VLAN.	Information	Completed the action Create VLAN.	Nothing
3070	Canceled the action Create VLAN.	Information	Canceled the action Create VLAN.	Nothing
3071	Aborted the action Create VLAN.	Warning	Aborted the action Create VLAN.	Check the cause in the SystemProvisioning log, remove the cause, and execute the process again.
3072	Started the action Create the virtual machine without OS.	Information	Started the action Create the virtual machine without OS.	Nothing
3073	Completed the action Create the virtual machine without OS.	Information	Completed the action Create the virtual machine without OS.	Nothing

Event ID	Description	Type	Meanings	Solution
3074	Canceled the action Create the virtual machine without OS.	Information	Canceled the action Create the virtual machine without OS.	Nothing
3075	Aborted the action Create the virtual machine without OS.	Warning	Aborted the action Create the virtual machine without OS.	Check the cause in the SystemProvisioning log, remove the cause, and execute the process again.
3076	Started the action Create the load balancer group.	Information	Started the action Create the load balancer group.	Nothing
3077	Completed the action Create the load balancer group.	Information	Completed the action Create the load balancer group.	Nothing
3078	Canceled the action Create the load balancer group.	Information	Canceled the action Create the load balancer group.	Nothing
3079	Aborted the action Create the load balancer group.	Warning	Aborted the action Create the load balancer group.	Check the cause in the SystemProvisioning log, remove the cause, and execute the process again.
3080	Started the action Create account	Information	Started the action Create account	Nothing
3081	Completed the action Create account	Information	Completed the action Create account	Nothing
3082	Canceled the action Create account	Information	Canceled the action Create account	Nothing
3083	Aborted the action Create account	Warning	Aborted the action Create account	Check the cause in the SystemProvisioning log, remove the cause, and execute the process again.
3084	Started the action Create a snapshot.	Information	Started the action Create a snapshot.	Nothing
3085	Completed the action Create a snapshot.	Information	Completed the action Create a snapshot.	Nothing
3086	Canceled the action Create a snapshot.	Information	Canceled the action Create a snapshot.	Nothing
3087	Aborted the action Create a snapshot.	Warning	Aborted the action Create a snapshot.	Check the cause in the SystemProvisioning log, remove the cause, and execute the process again.
3088	Started the action Create the VLAN into specified switch.	Information	Started the action Create the VLAN into specified switch.	Nothing

Event ID	Description	Type	Meanings	Solution
3089	Completed the action Create the VLAN into specified switch.	Information	Completed the action Create the VLAN into specified switch.	Nothing
3090	Canceled the action Create the VLAN into specified switch.	Information	Canceled the action Create the VLAN into specified switch.	Nothing
3091	Aborted the action Create the VLAN into specified switch.	Warning	Aborted the action Create the VLAN into specified switch.	Check the cause in the SystemProvisioning log, remove the cause, and execute the process again.
3092	Started the action The Datacenter delete.	Information	Started the action The Datacenter delete.	Nothing
3093	Completed the action The Datacenter delete.	Information	Completed the action The Datacenter delete.	Nothing
3094	Canceled the action The Datacenter delete.	Information	Canceled the action The Datacenter delete.	Nothing
3095	Aborted the action The Datacenter delete.	Warning	Aborted the action The Datacenter delete.	Check the cause in the SystemProvisioning log, remove the cause, and execute the process again.
3096	Started the action Delete datastore	Information	Started the action Delete datastore	Nothing
3097	Completed the action Delete datastore	Information	Completed the action Delete datastore	Nothing
3098	Canceled the action Delete datastore	Information	Canceled the action Delete datastore	Nothing
3099	Aborted the action Delete datastore	Warning	Aborted the action Delete datastore	Check the cause in the SystemProvisioning log, remove the cause, and execute the process again.
3100	Started the action Delete the disk array.	Information	Started the action Delete the disk array.	Nothing
3101	Completed the action Delete the disk array.	Information	Completed the action Delete the disk array.	Nothing
3102	Canceled the action Delete the disk array.	Information	Canceled the action Delete the disk array.	Nothing
3103	Aborted the action Delete the disk array.	Warning	Aborted the action Delete the disk array.	Check the cause in the SystemProvisioning log, remove the cause, and execute the process again.
3104	Started the action Delete VLAN.	Information	Started the action Delete VLAN.	Nothing
3105	Completed the action Delete VLAN.	Information	Completed the action Delete VLAN.	Nothing

Event ID	Description	Type	Meanings	Solution
3106	Canceled the action Delete VLAN.	Information	Canceled the action Delete VLAN.	Nothing
3107	Aborted the action Delete VLAN.	Warning	Aborted the action Delete VLAN.	Check the cause in the SystemProvisioning log, remove the cause, and execute the process again.
3108	Started the action delete image	Information	Started the action delete image	Nothing
3109	Completed the action delete image	Information	Completed the action delete image	Nothing
3110	Canceled the action delete image	Information	Canceled the action delete image	Nothing
3111	Aborted the action delete image	Warning	Aborted the action delete image	Check the cause in the SystemProvisioning log, remove the cause, and execute the process again.
3112	Started the action Delete the load balancer group.	Information	Started the action Delete the load balancer group.	Nothing
3113	Completed the action Delete the load balancer group.	Information	Completed the action Delete the load balancer group.	Nothing
3114	Canceled the action Delete the load balancer group.	Information	Canceled the action Delete the load balancer group.	Nothing
3115	Aborted the action Delete the load balancer group.	Warning	Aborted the action Delete the load balancer group.	Check the cause in the SystemProvisioning log, remove the cause, and execute the process again.
3116	Started the action Unregistering logical machine	Information	Started the action Unregistering logical machine	Nothing
3117	Completed the action Unregistering logical machine	Information	Completed the action Unregistering logical machine	Nothing
3118	Canceled the action Unregistering logical machine	Information	Canceled the action Unregistering logical machine	Nothing
3119	Aborted the action Unregistering logical machine	Warning	Aborted the action Unregistering logical machine	Check the cause in the SystemProvisioning log, remove the cause, and execute the process again.
3120	Started the action Delete account	Information	Started the action Delete account	Nothing

Event ID	Description	Type	Meanings	Solution
3121	Completed the action Delete account	Information	Completed the action Delete account	Nothing
3122	Canceled the action Delete account	Information	Canceled the action Delete account	Nothing
3123	Aborted the action Delete account	Warning	Aborted the action Delete account	Check the cause in the SystemProvisioning log, remove the cause, and execute the process again.
3124	Started the action Delete the manager.	Information	Started the action Delete the manager.	Nothing
3125	Completed the action Delete the manager.	Information	Completed the action Delete the manager.	Nothing
3126	Canceled the action Delete the manager.	Information	Canceled the action Delete the manager.	Nothing
3127	Aborted the action Delete the manager.	Warning	Aborted the action Delete the manager.	Check the cause in the SystemProvisioning log, remove the cause, and execute the process again.
3128	Started the action Delete a snapshot.	Information	Started the action Delete a snapshot.	Nothing
3129	Completed the action Delete a snapshot.	Information	Completed the action Delete a snapshot.	Nothing
3130	Canceled the action Delete a snapshot.	Information	Canceled the action Delete a snapshot.	Nothing
3131	Aborted the action Delete a snapshot.	Warning	Aborted the action Delete a snapshot.	Check the cause in the SystemProvisioning log, remove the cause, and execute the process again.
3132	Started the action Delete the template.	Information	Started the action Delete the template.	Nothing
3133	Completed the action Delete the template.	Information	Completed the action Delete the template.	Nothing
3134	Canceled the action Delete the template.	Information	Canceled the action Delete the template.	Nothing
3135	Aborted the action Delete the template.	Warning	Aborted the action Delete the template.	Check the cause in the SystemProvisioning log, remove the cause, and execute the process again.
3136	Started the action Delete the virtual machine server.	Information	Started the action Delete the virtual machine server.	Nothing
3137	Completed the action Delete the virtual machine server.	Information	Completed the action Delete the virtual machine server.	Nothing

Event ID	Description	Type	Meanings	Solution
3138	Canceled the action Delete the virtual machine server.	Information	Canceled the action Delete the virtual machine server.	Nothing
3139	Aborted the action Delete the virtual machine server.	Warning	Aborted the action Delete the virtual machine server.	Check the cause in the SystemProvisioning log, remove the cause, and execute the process again.
3140	Started the action Delete the VLAN from switch.	Information	Started the action Delete the VLAN from switch.	Nothing
3141	Completed the action Delete the VLAN from switch.	Information	Completed the action Delete the VLAN from switch.	Nothing
3142	Canceled the action Delete the VLAN from switch.	Information	Canceled the action Delete the VLAN from switch.	Nothing
3143	Aborted the action Delete the VLAN from switch.	Warning	Aborted the action Delete the VLAN from switch.	Check the cause in the SystemProvisioning log, remove the cause, and execute the process again.
3144	Started the action Remove the relation of VLAN from switch.	Information	Started the action Remove the relation of VLAN from switch.	Nothing
3145	Completed the action Remove the relation of VLAN from switch.	Information	Completed the action Remove the relation of VLAN from switch.	Nothing
3146	Canceled the action Remove the relation of VLAN from switch.	Information	Canceled the action Remove the relation of VLAN from switch.	Nothing
3147	Aborted the action Remove the relation of VLAN from switch.	Warning	Aborted the action Remove the relation of VLAN from switch.	Check the cause in the SystemProvisioning log, remove the cause, and execute the process again.
3148	Started the action Disconnect DiskVolume to machine.	Information	Started the action Disconnect DiskVolume to machine.	Nothing
3149	Completed the action Disconnect DiskVolume to machine.	Information	Completed the action Disconnect DiskVolume to machine.	Nothing
3150	Canceled the action Disconnect DiskVolume to machine.	Information	Canceled the action Disconnect DiskVolume to machine.	Nothing
3151	Aborted the action Disconnect DiskVolume to machine.	Warning	Aborted the action Disconnect DiskVolume to machine.	Check the cause in the SystemProvisioning log, remove the cause, and execute the process again.

Event ID	Description	Type	Meanings	Solution
3152	Started the action Disconnect from the virtual machine server.	Information	Started the action Disconnect from the virtual machine server.	Nothing
3153	Completed the action Disconnect from the virtual machine server.	Information	Completed the action Disconnect from the virtual machine server.	Nothing
3154	Canceled the action Disconnect from the virtual machine server.	Information	Canceled the action Disconnect from the virtual machine server.	Nothing
3155	Aborted the action Disconnect from the virtual machine server.	Warning	Aborted the action Disconnect from the virtual machine server.	Check the cause in the SystemProvisioning log, remove the cause, and execute the process again.
3156	Started the action Execute local script.	Information	Started the action Execute local script.	Nothing
3157	Completed the action Execute local script.	Information	Completed the action Execute local script.	Nothing
3158	Canceled the action Execute local script.	Information	Canceled the action Execute local script.	Nothing
3159	Aborted the action Execute local script.	Warning	Aborted the action Execute local script.	Check the cause in the SystemProvisioning log, remove the cause, and execute the process again.
3160	Started the action Sensor diagnosis.	Information	Started the action Sensor diagnosis.	Nothing
3161	Completed the action Sensor diagnosis.	Information	Completed the action Sensor diagnosis.	Nothing
3162	Canceled the action Sensor diagnosis.	Information	Canceled the action Sensor diagnosis.	Nothing
3163	Aborted the action Sensor diagnosis.	Warning	Aborted the action Sensor diagnosis.	Check the cause in the SystemProvisioning log, remove the cause, and execute the process again.
3164	Started the action Diagnose the machine.	Information	Started the action Diagnose the machine.	Nothing
3165	Completed the action Diagnose the machine.	Information	Completed the action Diagnose the machine.	Nothing
3166	Canceled the action Diagnose the machine.	Information	Canceled the action Diagnose the machine.	Nothing
3167	Aborted the action Diagnose the machine.	Warning	Aborted the action Diagnose the machine.	Check the cause in the SystemProvisioning log, remove the cause, and execute the process again.

Event ID	Description	Type	Meanings	Solution
3168	Started the action Turn off LED request	Information	Started the action Turn off LED request	Nothing
3169	Completed the action Turn off LED request	Information	Completed the action Turn off LED request	Nothing
3170	Canceled the action Turn off LED request	Information	Canceled the action Turn off LED request	Nothing
3171	Aborted the action Turn off LED request	Warning	Aborted the action Turn off LED request	Check the cause in the SystemProvisioning log, remove the cause, and execute the process again.
3172	Started the action Turn on LED request	Information	Started the action Turn on LED request	Nothing
3173	Completed the action Turn on LED request	Information	Completed the action Turn on LED request	Nothing
3174	Canceled the action Turn on LED request	Information	Canceled the action Turn on LED request	Nothing
3175	Aborted the action Turn on LED request	Warning	Aborted the action Turn on LED request	Check the cause in the SystemProvisioning log, remove the cause, and execute the process again.
3176	Started the action Modify the disk array.	Information	Started the action Modify the disk array.	Nothing
3177	Completed the action Modify the disk array.	Information	Completed the action Modify the disk array.	Nothing
3178	Canceled the action Modify the disk array.	Information	Canceled the action Modify the disk array.	Nothing
3179	Aborted the action Modify the disk array.	Warning	Aborted the action Modify the disk array.	Check the cause in the SystemProvisioning log, remove the cause, and execute the process again.
3180	Started the action Modify the disk volume.	Information	Started the action Modify the disk volume.	Nothing
3181	Completed the action Modify the disk volume.	Information	Completed the action Modify the disk volume.	Nothing
3182	Canceled the action Modify the disk volume.	Information	Canceled the action Modify the disk volume.	Nothing
3183	Aborted the action Modify the disk volume.	Warning	Aborted the action Modify the disk volume.	Check the cause in the SystemProvisioning log, remove the cause, and execute the process again.
3184	Started the action Modify the load balancer group.	Information	Started the action Modify the load balancer group.	Nothing

Event ID	Description	Type	Meanings	Solution
3185	Completed the action Modify the load balancer group.	Information	Completed the action Modify the load balancer group.	Nothing
3186	Canceled the action Modify the load balancer group.	Information	Canceled the action Modify the load balancer group.	Nothing
3187	Aborted the action Modify the load balancer group.	Warning	Aborted the action Modify the load balancer group.	Check the cause in the SystemProvisioning log, remove the cause, and execute the process again.
3188	Started the action Modify the manager.	Information	Started the action Modify the manager.	Nothing
3189	Completed the action Modify the manager.	Information	Completed the action Modify the manager.	Nothing
3190	Canceled the action Modify the manager.	Information	Canceled the action Modify the manager.	Nothing
3191	Aborted the action Modify the manager.	Warning	Aborted the action Modify the manager.	Check the cause in the SystemProvisioning log, remove the cause, and execute the process again.
3192	Started the action Edit a snapshot.	Information	Started the action Edit a snapshot.	Nothing
3193	Completed the action Edit a snapshot.	Information	Completed the action Edit a snapshot.	Nothing
3194	Canceled the action Edit a snapshot.	Information	Canceled the action Edit a snapshot.	Nothing
3195	Aborted the action Edit a snapshot.	Warning	Aborted the action Edit a snapshot.	Check the cause in the SystemProvisioning log, remove the cause, and execute the process again.
3196	Started the action Modify VLAN	Information	Started the action Modify VLAN	Nothing
3197	Completed the action Modify VLAN	Information	Completed the action Modify VLAN	Nothing
3198	Canceled the action Modify VLAN	Information	Canceled the action Modify VLAN	Nothing
3199	Aborted the action Modify VLAN	Warning	Aborted the action Modify VLAN	Check the cause in the SystemProvisioning log, remove the cause, and execute the process again.
3200	Started the action Moving the virtual machine server.	Information	Started the action Moving the virtual machine server.	Nothing

Event ID	Description	Type	Meanings	Solution
3201	Completed the action Moving the virtual machine server.	Information	Completed the action Moving the virtual machine server.	Nothing
3202	Canceled the action Moving the virtual machine server.	Information	Canceled the action Moving the virtual machine server.	Nothing
3203	Aborted the action Moving the virtual machine server.	Warning	Aborted the action Moving the virtual machine server.	Check the cause in the SystemProvisioning log, remove the cause, and execute the process again.
3204	Started the action recovering a virtual machine server	Information	Started the action recovering a virtual machine server	Nothing
3205	Completed the action recovering a virtual machine server	Information	Completed the action recovering a virtual machine server	Nothing
3206	Canceled the action recovering a virtual machine server	Information	Canceled the action recovering a virtual machine server	Nothing
3207	Aborted the action recovering a virtual machine server	Warning	Aborted the action recovering a virtual machine server	Check the cause in the SystemProvisioning log, remove the cause, and execute the process again.
3208	Started the action Bind the disk volume.	Information	Started the action Bind the disk volume.	Nothing
3209	Completed the action Bind the disk volume.	Information	Completed the action Bind the disk volume.	Nothing
3210	Canceled the action Bind the disk volume.	Information	Canceled the action Bind the disk volume.	Nothing
3211	Aborted the action Bind the disk volume.	Warning	Aborted the action Bind the disk volume.	Check the cause in the SystemProvisioning log, remove the cause, and execute the process again.
3212	Started the action Collect specified disk array information.	Information	Started the action Collect specified disk array information.	Nothing
3213	Completed the action Collect specified disk array information.	Information	Completed the action Collect specified disk array information.	Nothing
3214	Canceled the action Collect specified disk array information.	Information	Canceled the action Collect specified disk array information.	Nothing

Event ID	Description	Type	Meanings	Solution
3215	Aborted the action Collect specified disk array information.	Warning	Aborted the action Collect specified disk array information.	Check the cause in the SystemProvisioning log, remove the cause, and execute the process again.
3216	Started the action Refresh the machine information.	Information	Started the action Refresh the machine information.	Nothing
3217	Completed the action Refresh the machine information.	Information	Completed the action Refresh the machine information.	Nothing
3218	Canceled the action Refresh the machine information.	Information	Canceled the action Refresh the machine information.	Nothing
3219	Aborted the action Refresh the machine information.	Warning	Aborted the action Refresh the machine information.	Check the cause in the SystemProvisioning log, remove the cause, and execute the process again.
3220	Started the action Refresh the network device information.	Information	Started the action Refresh the network device information.	Nothing
3221	Completed the action Refresh the network device information.	Information	Completed the action Refresh the network device information.	Nothing
3222	Canceled the action Refresh the network device information.	Information	Canceled the action Refresh the network device information.	Nothing
3223	Aborted the action Refresh the network device information.	Warning	Aborted the action Refresh the network device information.	Check the cause in the SystemProvisioning log, remove the cause, and execute the process again.
3224	Started the action Register the machine to DeploymentManager	Information	Started the action Register the machine to DeploymentManagerr	Nothing
3225	Completed the action Register the machine to DeploymentManager	Information	Completed the action Register the machine to DeploymentManager	Nothing
3226	Canceled the action Register the machine to DeploymentManager	Information	Canceled the action Register the machine to DeploymentManager	Nothing
3227	Aborted the action Register the machine to DeploymentManager	Warning	Aborted the action Register the machine to DeploymentManager	Check the cause in the SystemProvisioning log, remove the cause, and execute the process again.
3228	Started the action Add a port to VLAN.	Information	Started the action Add a port to VLAN.	Nothing

Event ID	Description	Type	Meanings	Solution
3229	Completed the action Add a port to VLAN.	Information	Completed the action Add a port to VLAN.	Nothing
3230	Canceled the action Add a port to VLAN.	Information	Canceled the action Add a port to VLAN.	Nothing
3231	Aborted the action Add a port to VLAN.	Warning	Aborted the action Add a port to VLAN.	Check the cause in the SystemProvisioning log, remove the cause, and execute the process again.
3232	Started the action Remove the registration machine from VLAN.	Information	Started the action Remove the registration machine from VLAN.	Nothing
3233	Completed the action Remove the registration machine from VLAN.	Information	Completed the action Remove the registration machine from VLAN.	Nothing
3234	Canceled the action Remove the registration machine from VLAN.	Information	Canceled the action Remove the registration machine from VLAN.	Nothing
3235	Aborted the action Remove the registration machine from VLAN.	Warning	Aborted the action Remove the registration machine from VLAN.	Check the cause in the SystemProvisioning log, remove the cause, and execute the process again.
3236	Started the action Disconnect disk array from HBA.	Information	Started the action Disconnect disk array from HBA.	Nothing
3237	Completed the action Disconnect disk array from HBA.	Information	Completed the action Disconnect disk array from HBA.	Nothing
3238	Canceled the action Disconnect disk array from HBA.	Information	Canceled the action Disconnect disk array from HBA.	Nothing
3239	Aborted the action Disconnect disk array from HBA.	Warning	Aborted the action Disconnect disk array from HBA.	Check the cause in the SystemProvisioning log, remove the cause, and execute the process again.
3240	Started the action Revert a snapshot.	Information	Started the action Revert a snapshot.	Nothing
3241	Completed the action Revert a snapshot.	Information	Completed the action Revert a snapshot.	Nothing
3242	Canceled the action Revert a snapshot.	Information	Canceled the action Revert a snapshot.	Nothing
3243	Aborted the action Revert a snapshot.	Warning	Aborted the action Revert a snapshot.	Check the cause in the SystemProvisioning log, remove the cause, and execute the process again.

Event ID	Description	Type	Meanings	Solution
3244	Started the action Scan datastore	Information	Started the action Scan datastore	Nothing
3245	Completed the action Scan datastore	Information	Completed the action Scan datastore	Nothing
3246	Canceled the action Scan datastore	Information	Canceled the action Scan datastore	Nothing
3247	Aborted the action Scan datastore	Warning	Aborted the action Scan datastore	Check the cause in the SystemProvisioning log, remove the cause, and execute the process again.
3248	Started the action Change the name of Datacenter.	Information	Started the action Change the name of Datacenter.	Nothing
3249	Completed the action Change the name of Datacenter.	Information	Completed the action Change the name of Datacenter.	Nothing
3250	Canceled the action Change the name of Datacenter.	Information	Canceled the action Change the name of Datacenter.	Nothing
3251	Aborted the action Change the name of Datacenter.	Warning	Aborted the action Change the name of Datacenter.	Check the cause in the SystemProvisioning log, remove the cause, and execute the process again.
3252	Started the action Set degraded status to machine.	Information	Started the action Set degraded status to machine.	Nothing
3253	Completed the action Set degraded status to machine.	Information	Completed the action Set degraded status to machine.	Nothing
3254	Canceled the action Set degraded status to machine.	Information	Canceled the action Set degraded status to machine.	Nothing
3255	Aborted the action Set degraded status to machine.	Warning	Aborted the action Set degraded status to machine.	Check the cause in the SystemProvisioning log, remove the cause, and execute the process again.
3256	Started the action Register VLAN to the machine.	Information	Started the action Register VLAN to the machine.	Nothing
3257	Completed the action Register VLAN to the machine.	Information	Completed the action Register VLAN to the machine.	Nothing
3258	Canceled the action Register VLAN to the machine.	Information	Canceled the action Register VLAN to the machine.	Nothing

Event ID	Description	Type	Meanings	Solution
3259	Aborted the action Register VLAN to the machine.	Warning	Aborted the action Register VLAN to the machine.	Check the cause in the SystemProvisioning log, remove the cause, and execute the process again.
3260	Started the action Set the faulted status to machine.	Information	Started the action Set the faulted status to machine.	Nothing
3261	Completed the action Set the faulted status to machine.	Information	Completed the action Set the faulted status to machine.	Nothing
3262	Canceled the action Set the faulted status to machine.	Information	Canceled the action Set the faulted status to machine.	Nothing
3263	Aborted the action Set the faulted status to machine.	Warning	Aborted the action Set the faulted status to machine.	Check the cause in the SystemProvisioning log, remove the cause, and execute the process again.
3264	Started the action Connect disk array to HBA.	Information	Started the action Connect disk array to HBA.	Nothing
3265	Completed the action Connect disk array to HBA.	Information	Completed the action Connect disk array to HBA.	Nothing
3266	Canceled the action Connect disk array to HBA.	Information	Canceled the action Connect disk array to HBA.	Nothing
3267	Aborted the action Connect disk array to HBA.	Warning	Aborted the action Connect disk array to HBA.	Check the cause in the SystemProvisioning log, remove the cause, and execute the process again.
3268	Started the action Set ready status to machine.	Information	Started the action Set ready status to machine.	Nothing
3269	Completed the action Set ready status to machine.	Information	Completed the action Set ready status to machine.	Nothing
3270	Canceled the action Set ready status to machine.	Information	Canceled the action Set ready status to machine.	Nothing
3271	Aborted the action Set ready status to machine.	Warning	Aborted the action Set ready status to machine.	Check the cause in the SystemProvisioning log, remove the cause, and execute the process again.
3272	Started the action Set maintenance status of the machine.	Information	Started the action Set maintenance status of the machine.	Nothing

Event ID	Description	Type	Meanings	Solution
3273	Completed the action Set maintenance status of the machine.	Information	Completed the action Set maintenance status of the machine.	Nothing
3274	Canceled the action Set maintenance status of the machine.	Information	Canceled the action Set maintenance status of the machine.	Nothing
3275	Aborted the action Set maintenance status of the machine.	Warning	Aborted the action Set maintenance status of the machine.	Check the cause in the SystemProvisioning log, remove the cause, and execute the process again.
3276	Started the action Change the configuration of the virtual machine.	Information	Started the action Change the configuration of the virtual machine.	Nothing
3277	Completed the action Change the configuration of the virtual machine.	Information	Completed the action Change the configuration of the virtual machine.	Nothing
3278	Canceled the action Change the configuration of the virtual machine.	Information	Canceled the action Change the configuration of the virtual machine.	Nothing
3279	Aborted the action Change the configuration of the virtual machine.	Warning	Aborted the action Change the configuration of the virtual machine.	Check the cause in the SystemProvisioning log, remove the cause, and execute the process again.
3280	Started the action Composite diagnosis based on state of VMS and sensor	Information	Started the action Composite diagnosis based on state of VMS and sensor	Nothing
3281	Completed the action Composite diagnosis based on state of VMS and sensor	Information	Completed the action Composite diagnosis based on state of VMS and sensor	Nothing
3282	Canceled the action Composite diagnosis based on state of VMS and sensor	Information	Canceled the action Composite diagnosis based on state of VMS and sensor	Nothing
3283	Aborted the action Composite diagnosis based on state of VMS and sensor	Warning	Aborted the action Composite diagnosis based on state of VMS and sensor	Check the cause in the SystemProvisioning log, remove the cause, and execute the process again.
3284	Started the action Unbind the disk volume.	Information	Started the action Unbind the disk volume.	Nothing
3285	Completed the action Unbind the disk volume.	Information	Completed the action Unbind the disk volume.	Nothing
3286	Canceled the action Unbind the disk volume.	Information	Canceled the action Unbind the disk volume.	Nothing

Event ID	Description	Type	Meanings	Solution
3287	Aborted the action Unbind the disk volume.	Warning	Aborted the action Unbind the disk volume.	Check the cause in the SystemProvisioning log, remove the cause, and execute the process again.
3288	Started the action Unregistering the machine from DeploymentManager	Information	Started the action Unregistering the machine from DeploymentManager	Nothing
3289	Completed the action Unregistering the machine from DeploymentManager	Information	Completed the action Unregistering the machine from DeploymentManager	Nothing
3290	Canceled the action Unregistering the machine from DeploymentManager	Information	Canceled the action Unregistering the machine from DeploymentManager	Nothing
3291	Aborted the action Unregistering the machine from DeploymentManager	Warning	Aborted the action Unregistering the machine from DeploymentManager	Check the cause in the SystemProvisioning log, remove the cause, and execute the process again.
3292	Started the action Removed a port by VLAN.	Information	Started the action Removed a port by VLAN.	Nothing
3293	Completed the action Removed a port by VLAN.	Information	Completed the action Removed a port by VLAN.	Nothing
3294	Canceled the action Removed a port by VLAN.	Information	Canceled the action Removed a port by VLAN.	Nothing
3295	Aborted the action Removed a port by VLAN.	Warning	Aborted the action Removed a port by VLAN.	Check the cause in the SystemProvisioning log, remove the cause, and execute the process again.
3296	Started the action Update account	Information	Started the action Update account	Nothing
3297	Completed the action Update account	Information	Completed the action Update account	Nothing
3298	Canceled the action Update account	Information	Canceled the action Update account	Nothing
3299	Aborted the action Update account	Warning	Aborted the action Update account	Check the cause in the SystemProvisioning log, remove the cause, and execute the process again.
3300	Started the action Notify group edit to DPM.	Information	Started the action to notify DPM to edit groups.	Nothing

Event ID	Description	Type	Meanings	Solution
3301	Completed the action Notify group edit to DPM.	Information	Completed the action to notify DPM to edit groups.	Nothing
3302	Canceled the action Notify group edit to DPM.	Information	Canceled the action to notify DPM to edit groups.	Nothing
3303	Aborted the action Notify group edit to DPM.	Warning	Aborted the action to notify DPM to edit groups.	Check the cause in the SystemProvisioning log, remove the cause, and execute the process again.
3304	Started the action Notify group move to DPM.	Information	Started the action to notify DPM to move groups.	Nothing
3305	Completed the action Notify group move to DPM.	Information	Completed the action to notify DPM to move groups.	Nothing
3306	Completed the action Notify group move to DPM.	Information	Canceled the action to notify DPM to move groups.	Nothing
3307	Aborted the action Notify group move to DPM.	Warning	Aborted the action to notify DPM to move groups.	Check the cause in the SystemProvisioning log, remove the cause, and execute the process again.
3308	Started the action Notify the group registration information on a machine to DPM.	Information	Started the action to notify DPM the registered information of the machine.	Nothing
3309	Completed the action Notify the group registration information on a machine to DPM.	Information	Completed the action to notify DPM the registered information of the machine.	Nothing
3310	Canceled the action Notify the group registration information on a machine to DPM.	Information	Canceled the action to notify DPM the registered information of the machine.	Nothing
3311	Aborted the action Notify the group registration information on a machine to DPM.	Warning	Aborted the action to notify DPM the registered information of the machine.	Check the cause in the SystemProvisioning log, remove the cause, and execute the process again.
3312	Started the action Notify the group registration information on a machine to DPM.	Information	Started the action to notify DPM the registered information of the machine.	Nothing
3313	Completed the action Notify the group registration information on a machine to DPM.	Information	Completed the action to notify DPM the registered information of the machine.	Nothing

Event ID	Description	Type	Meanings	Solution
3314	Canceled the action Notify the group registration information on a machine to DPM.	Information	Canceled the action to notify DPM the registered information of the machine.	Nothing
3315	Aborted the action Notify the group registration information on a machine to DPM.	Warning	Aborted the action to notify DPM the registered information of the machine.	Check the cause in the SystemProvisioning log, remove the cause, and execute the process again.
3316	Started the action Notify machine move to DPM.	Information	Started the action to notify DPM to move machine.	Nothing
3317	Completed the action Notify machine move to DPM.	Information	Completed the action to notify DPM to move machine.	Nothing
3318	Canceled the action Notify machine move to DPM.	Information	Canceled the action to notify DPM to move machine.	Nothing
3319	Aborted the action Notify machine move to DPM.	Warning	Aborted the action to notify DPM to move machine.	Check the cause in the SystemProvisioning log, remove the cause, and execute the process again.
7000	User ("User Name") changed the maintenance status of machine ("Machine Name") to [On].	Information	Maintenance ON of the machine is success.	Nothing
7001	User ("User Name") changed the maintenance status of machine ("Machine Name") to [Off]	Information	Maintenance OFF of the machine is success.	Nothing
7002	User ("User Name") reset the failure status of machine ("Machine Name").	Information	Reset the failure status of the machine is success.	Nothing
7003	User ("User Name") reset the error status of machine ("Machine Name").	Information	Reset the execution result of the job of the machine is success.	Nothing

*1 In SigmaSystemCenter 3.0, event ID:502 has not been recognized by report registration of ID=502 to ESMPRO. In order to make ESMPRO recognize the event ID:502, start NEC ESMPRO Agent in the control panel of the NEC ESMPRO Agent installed machine, and click Report Setting (R) in the General tab to start Alert Manager. Then, set green icon ID=502 to be a monitored target from PVM application.

*2 If it is detected via NEC ESMPRO Manager and the target machine is a virtual machine, it is registered as ID=52x.

*3 For information level messages, SystemProvisioning sends a message which does not influence on the result of the target process. E.g) An action which moves all virtual machines is executed but any virtual machine to be moved does not exist.

For warning level messages, SystemProvisioning sends a message which seriously influence on the result of the target process. E.g.) A load balancing action is executed but the high load is not reduced.

- About output messages whose event IDs are 51X, 52X, 53X, and 54X

  Additional information is added to output messages whose event IDs are 51X, 52X, 53X, and 54X as follows:

E.g.) Output message for event ID：541

```
The action (SetFaultedStatus) has been completed.
Management ID:00049-01
------------------------------
[EventNumber] RE00144
[EventType] Information
[EventCategory] TargetDown
[EventSource] VC[https://192.168.10.220:50443/sdk]
DataCenter[dataCenterB] ESX[192.168.220.142] VM[host10]
[Provider] VMwareProvider
[Provider(ID)] VMwareProvider
[Event] VM on VMS in DC is powered off
[EventMessage] VM on VMS in DC is powered off
[GroupName] \\yyy\vv
[PolicyName] Standard Policy
[JobId] 00049-01

[ActionSummary] Set the faulted status to machine.
[ActionDiscription] Machine status/ Set faulted status
[TargetMachineName(0):(Machine)] host10
[TargetMachineUnitName(0):(Machine)]
[TargetMachineUUID(0):(Machine)]
42176ffd-60d3-3133-8bf2-b1c048215206

(Machine) is Set the machine model.
```

Additional information is as follows:

Additional information name	Description	Event ID: 51X, 52X	Event ID: 53X, 54X
[EventNumber]	Number of the notified event	Yes	Yes
[EventType]	Type of the notified event (any of "Information", "Warning", or "Error")	Yes	Yes
[EventCategory]	Category of the notified event	Yes	Yes
[EventSource]	Source of the notified event	Yes	Yes
[Provider]	Provider of the notified event	Yes	Yes
[Provider(ID)]	Provider (ID) of the notified event	Yes	Yes
[Event]	Information identifies the notified event	Yes	Yes
[EventMessage]	Message of the notified event	Yes	Yes
[ManagerName]	Manager name of the notified event		Yes
[GroupName]	Operation group name of the notified event		Yes
[PolicyName]	Policy name applied to the notified event		Yes
[JobId]	Job ID of the notified event		Yes
[ActionSummary]	Summary of the action executed / to be exectuted		Yes
[ActionDiscription]	Description of the action executed / to be executed		Yes
[WarningMessage]	Result of the action execution, not failed but generated a supplementary (caution) message		Yes
[ExceptionMessage]	Action failed message		Yes
TargetGroupName(x):(yyy)	Group information for action execution x indicates the order if multiple groups exist. yyy is a parameter name in the action sequence.		Yes
TargetMachineName(x):(yyy)	Machine information for action execution x indicates the order if multiple machines exist. yyy is a parameter name in the action sequence.		Yes
TargetMachineUnitName(x):(yyy)	Machine information for action execution x indicates the order if multiple machines exist. yyy is a parameter name in the action sequence.		Yes
TargetMachineUUID(x):(yyy)	Machine information for action execution x indicates the order if multiple machines exist. yyy is a parameter name in the action sequence.		Yes
TargetHostName(x):(yyy)	Host information for action execution x indicates the order if multiple hosts exist. yyy is a parameter name in the action sequence.		Yes
TargetDiskPartitionName(x):(yyy)	Partition information for action execution x indicates the order if multiple partitions exist. yyy is a parameter name in the action sequence.		Yes
TargetManagerName(x):(yyy)	Manager information for action execution x indicates the order if multiple machines exist. yyy is a parameter name in the action sequence.		Yes

Additional information name	Description	Event ID: 51X, 52X	Event ID: 53X, 54X
other(x):(yyy)	Other information for action execution x indicates the order if multiple machines exist. yyy is a parameter name in the action sequence.		Yes
(yyy) is zzz	Explanation of yyy included in the action information key.		Yes

2.2.2. Event Logs Regarding Compatibility With NEC ESMPRO Manager

The followings are the event logs that SystemProvisioning records regarding working together with NEC ESMPRO Manager. The event source name is PVM.

Event ID	Description	Type	Meanings	Solution
101	NvBase System Service has not been started.	Error	The service of NEC ESMPRO Manager (NvBase System Service) is not started.	Check that the NvBase System Service of NEC ESMPRO Manager is started. If it is not started, start the service.
102	NvBase System Service has been started. Resumed monitoring events.	Information	Since the service of NEC ESMPRO Manager (NvBase System Service) is started, monitoring events was resumed.	Nothing
103	NvBase System Service is not installed.	Error	NEC ESMPRO Manager is not installed.	Install NEC ESMPRO Manager.

2.3. List of Log Files

This section gives you lists of log files that each component of SigmaSystemCenter outputs. To the log files, maximum size is set and SigmaSystemCenter manages the files by generation management.

2.3.1. Logs of SystemProvisioning

The logs SystemProvisioning outputs are as follows:

- SystemProvisioning

Folder	*SystemProvisioning installation folder*\log\ (Default installation folder: C:\Program Files\NEC\PVM\log)
Files	ActionJob.log ActionSequence.log AliveMonitor.log CacheManager.log CmdbApi.log CmdbApiAccess.log CmdbConfig.log CmdbConverter.log CmdbSqlSession.log ComponentManager.log DataAccess.log DataAccessError.log DpmLibWrapper.log DpmProvider.log Engine.log EsmproMonitor.log EsmproProvider.log HyperVProvider.log InformationCollect.log JobManager.log KvmProvider.log LibvirtWrapper.log logAfterShutdown.log loginit.log MaintenanceCmdb.log MaintenanceHardwarePartsStatus.log ManagementLogWriter.log PimProvider.log PlacementEvent.log ProviderCommon.log PvmClarix.log PvmEventlog.log PvmiStorage.log PvmMachineEvent.log

	PvmNetApp.log PvmNetvisorpro.log PvmPimIpmi.log PvmPimIpmi_Rmcp.log PVMReport.log PvmStorage.log PvmSwitchBlade.log PvmSymmetrix.log pvmutl.log ResourceEventList.log ResourceEventListener.log ResourceEventSender.log rm_pfmAPI.log rm_pfmAPI_old.log SLBProvider.log ssc.log ssc-old.log SystemEvent.log Usual.log UniversalConnector.log UniversalConnectorDefect.log VMwareProvider.log VMwareProviderInfo.log VMwareProviderEsxEvent.log VMwareProviderEvent.log VncClient.log WebConnector.log XenProvider.log
Contents	Operations los and debug logs of SystemProvisioning
Recording Method	If the size of a log file exceeds the maximum size, the log file is backed up by renaming it "*filename*.log.1" (except for pvmutl.log, ssc.log, rm_pfmAPI.log). Just one backup file, "*filename*.log.1", is created as a general rule, but more than one backup files are created for some log files.
Supplement	・ You can check the log files with Text Editor. ・ You can change the maximum output size from the **Management** tree - **Environment Setting** icon - **Log** tab - **The Maximum Output Size** box. Some log files' sizes could be twofold of the value of **The Maximum Output Size** box. (The size of rm_pfmAPI.log is fixed to 1 MB.)

◆ SystemProvisioning Web Console

Folder	*SigmaSystemCenter installation folder*\PVM\Provisioning\Logs\ (Default installation folder: C:\Program Files\NEC\PVM\Provisioning\Logs)
Files	Web-GUI.log Web-GUI.log.1
Contents	Error information and trace information of SystemProvisioning (GUI)
Recording Method	The maximum size of the file is 16 MB and the file is managed up until the second generation. When Web-GUI.log has reached the maximum size, it is renamed to

	Web-GUI.log.1 and the new Web-GUI.log is created. (If Web-GUI.log.1 already exists, it is deleted.)
Supplement	You can check the log files with Text Editor.

◆ SystemProvisioning Virtual Machine Console and SOL Console

Folder	*Application data folder of the current non-roaming user*\SSC ▪ For Windows Server 2008 or later: (Default value: C:\Users*User Name*\AppData\Local\SSC) ▪ Windows Server 2003 or before: (Default value: C:\Documents and Settings*User Name*\Local Settings\Application Data\SSC)
Files	HyperVConsole_Main.log HyperVConsole_Main.log.1 KvmConsole_Main.log KvmConsole_Main.log.1 KvmConsole_VncClient.log KvmConsole_VncClient.log.1 SOLConsole_Main.log SOLConsole_Main.log.1 SOLConsole_PimIpmiClient.log SOLConsole_PimIpmiClient.log.1 SOLConsole_RmcpClient.log SOLConsole_RmcpClient.log.1 VncConsole_Main.log VncConsole_Main.log.1 XenServerConsole_Main.log XenServerConsole_Main.log.1 XenServerConsole_VncClient.log XenServerConsole_VncClient.log.1
Contents	Error information and trace information of SystemProvisioning Virtual Machine Console and SOL Console.
Recording Method	The maximum size of each file is 4 MB and the file is managed up until the second generation. If the size of a log file exceeds the maximum size, the log file is backed up by renaming it "*filename*.log.1." Because a log file is created only when a log is output, some files in the above list may not exist.
Supplement	You can check the log files with Text Editor.

2.3.2. Logs of DPM

The logs DPM outputs are as follows:

◆ DPM Server

The logs output in a DPM Server installed machine are as follows:

Folder	*DPM Server installation folder*\Log\ ▪ For x86 OS machines (Default installation folder: C:\Program Files\NEC\DeploymentManager\Log) ▪ For x64 OS machines (Default folder: C:\Program Files (x86)\NEC\DeploymentManager\Log)
Files	apiserv.csv apitrace.log bkressvc.csv DepInit.csv depssvc.csv DIBPkgMake.csv ftsvc.csv pmdb.log pminfo.log pxemtftp.csv pxesvc.csv rupdssvc.csv schwatch.csv rupdssvc_*Managed Machine Name_Managed Machine's MAC Address*.log
Contents	Trace logs, error information, and database access logs of DPM
Recording Method	The maximum size of apitrace.log is 1 MB. The maximum size of pmdb.log and pminfo.log is 16 KB. The maximum size of files other than the above mentioned is 10 MB. The *.csv files are managed up to five generations. (If a *.csv file exceeds the maximum size, the file is renamed to "*.csv.1." Then, other "*.csv.n" files are also renamed to "*.csv.n+1" and "*.csv.4" is deleted.) If apitrace.log exceeds its maximum file size, the file content is overwritten from the start line. The pmdb.log, pminfo.log, and rupdssvc_*Managed Machine Name_Managed Machine's MAC Address*.log is managed up to two generations. (If they exceed their maximum file sizes, the file names are renamed to "*.log.bak"s and the original "*.log.bak"s are deleted.) Furthermore, each file can be deleted manually. (Because *.csv and apitrace.log cannot be deleted if the DPM services are running, stop the DPM services and delete the files manually.)

Folder	*DPM Server installation folder*\Datafile\LogFile\SnrReport\ ▪ For x86 OS machines: (Default installation folder: C:\Program Files\NEC\DeploymentManager\Datafile\LogFile\SnrReport) ▪ For x64 OS machines: (Default installation folder: C:\Program Files

	(x86)\NEC\DeploymentManager\Datafile\ LogFile\SnrReport)
Files	Scenario.rpt
Contents	Result of scenario execution
Recording Method	There is no limit for its file size. You can delete the file on the DPM Web Console. (For deleting procedure, see Subsection 4.5.2, "Delete Log" in *DeploymentManager Reference Guide*.)

Folder	*DPM Server installation folder*\Datafile\LogFile\AuReport\ ▪ For x86 OS machines: (Default installation folder: C:\Program Files\NEC\DeploymentManager\Datafile\ LogFile\AuReport) ▪ For x64 OS machines: (Default installation folder: C:\Program Files (x86)\NEC\DeploymentManager\Datafile\ LogFile\AuReport)
Files	Index.rpt *Managed Machine's MAC Address*.rpt
Contents	Execution logs of automatic update (automatic distribution of applications) on a managed machine
Recording Method	The files are managed individually with a MAC address for each managed machine. Each file has no limit for its file size. The maximum number of logs can be set in the DPM Web Console. If the number of logs exceeds the maximum, the oldest one is deleted or 10 % of the oldest one is deleted. For the setting of the maximum number of logs, see Subsection 4.7.2, "Maximum Number of Logs Settings" in *DeploymentManager Reference Guide.* Log files can be deleted in the DPM Web Console. (For deleting procedure, see Subsection 4.7.4, "Delete Log" in *DeploymentManager Reference Guide*.)

Folder	*DPM Server installation folder*\Datafile\JSLog\ ▪ For x86 OS machines: (Default installation folder: C:\Program Files\NEC\DeploymentManager\Datafile\JSLog) ▪ For x64 OS machines: (Default installation folder: C:\Program Files (x86)\NEC\DeploymentManager\Datafile\ JSLog)
Files	CmdUserJSLog_YYYYMMDD.csv CmdSelfJSLog_YYYYMMDD.csv MngSelfJSLog_*YYYYMMDD*.csv MngUserJSLog_*YYYYMMDD*.csv (*YYYYMMDD*: Date) * When DPM Server is installed in a machine, both Image Builder and DPM Command Line are also installed in the same machine. Therefore, see the log explanations in "◆Image Builder (Remote Console)" and "◆DPM Command Line" described after this.
Contents	Audit log (Internal action in DPM Server / operation by a user)

Recording Method	Each file is saved in its current date file. Each file has no limit for its file size. Current date files cannot be deleted if the DPM services are running, but the past date files can be deleted manually. When 30 days pass after the create date, the files are automatically deleted.

Folder	*DPM Server installation folder*\ WebServer\Logs\ ▪ For x86 OS machines: (Default installation folder: C:\Program Files\NEC\DeploymentManager\ WebServer\Logs\) ▪ For x64 OS machines: (Default installation folder: C:\Program Files (x86)\NEC\DeploymentManager\ WebServer\Logs\)
Files	Browser.log Error.log JSOX-Event.csv LibAPI.log Polling.log Trace.log WebConsole.log
Contents	Failure information, trace, and Audit.log of the Web Console
Recording Method	Polling.log's maximum size is 1 MB. The maximum size of files other than the Polling.log is 10 MB. Polling.log is output only in the Polling.log file itself. JSOX-Event.csv is managed up to two generations. (If JSOX-Event.csv exceeds its maximum file size, its filename is renamed to JSOX-Event.csv.1 and the original JSOX-Event.csv.1 is deleted.) Files other than the above mentioned are managed up to six generations. (If a *.log file exceeds the maximum size, the file is renamed to "*.log.1." Then, other "*.log.n" files are also renamed to "*.log.n+1" and "*.log.5" is deleted.) Each file can be deleted manually.

Folder	*Folder for image*\upload\dpmupload\ (Default installation folder: C:\Deploy\upload\dpmupload)
Files	*Managed Machine's MAC Address*_B.zip *Managed Machine's MAC Address*_B_Error.zip *Managed Machine's MAC Address*_R.zip *Managed Machine's MAC Address*_R_Error.zip *Managed Machine's MAC Address*_P.zip *Managed Machine's MAC Address*_P_Error.zip *Managed Machine's MAC Address*.zip *Managed Machine's MAC Address* _Error.zip
Contents	Execution result of backup / restoration / disk configuration check on a managed machine
Recording Method	The files are managed individually with MAC address for each managed machine. The maximum size of each file is about 50 KB. They are overwritten every time a scenario is executed and can be deleted manually.

Folder	%SystemRoot%

	(Default foler: C:\WINDOWS)
Files	Inst_Dpm_Db.log Inst_Dpm_Ports.log Inst_DPM_Mng.log Inst_Dpm_Jre.log Inst_DPM_Win_Cli.log
Contents	Installation logs of DPM
Recording Method	Each file has no limit for its file size. Inst_Dpm_Db.log and Inst_Dpm_Jre.log are overwritten every time DPM Server is installed, so their file sizes are not increased after installation of DPM Server. The Inst_Dpm_Db.log and Inst_Dpm_Jre.log overwrite files of themselves for each installation of DPM Server and their file size will not increase after installed DPM server. In files other than those two files, their file size will increase monotonically. Each file can be deleted manually.

Folder	%ProgramFiles%\MSSQL10_50.DPMDBI\MSSQL\Log (Default installation folder: C:\Program Files\Microsoft SQL Server\ MSSQL10_50.DPMDBI\MSSQL\Log)
Files	ERRORLOG log_n.trc (*n* is a number)
Contents	SQL Server logs
Recording Method	Each file has no limit for its file size. ERRORLOG is managed up to seven generations. (If SQL Server (DPMDBI) restarts,, the file is renamed to "ERRORLOG.1." Then, other "ERRORLOG.n"s are also renamed to "ERRORLOG.n+1"s and "ERRORLOG.6" is deleted.) log_*n*.trc is managed up to five generations. (If log_1.trc - log_5.trc exist and SQL Server (DPMDBI) service is restarted, the log_1.trc is deleted and log_6.trc is newly created.) ERRORLOG cannot be deleted. log_*n*.trc cannot be deleted if SQL Server (DPMDBI) service is running, but past logs can be deleted manually.

◆ DPM Client (Windows)

The logs output in a DPM Client installed machine (Windows) are as follows:

Folder	▪ For x86 OS machines: C:\WINDOWS\system32 ▪ For x64 OS machines: C:\WINDOWS\SysWOW64
Files	DepAgent.log rupdsvc.log DPMTray.log
Contents	Service logs of DPM Client
Recording Method	The maximum size of DPMTray.log is 1 MB. The maximum size of the other files is 2 MB. DepAgent.log and rupdsvc.log is managed up to two generations. (If they exceed their maximum file sizes, the file names are renamed to "*.log.bak"s and the original "*.log.bak"s are deleted.) Each file can be deleted manually.

Folder	%SystemRoot%\DeploymentManager\JSLog (Default folder: C:\WINDOWS\DeploymentManager\JSLog)
Files	CliSelfJSLog_*YYYYMMDD*.csv (*YYYYMMDD*: date)
Contents	Audit log (Internal working of DPM Client)
Recording Method	Each file has no limit for its file size. Current date files cannot be deleted if the DPM services are running, but the past date files can be deleted manually. When 30 days pass after the create date, the files are automatically deleted.

◆ DPM Client (Linux)

The log output in a DPM Client installed machine (Linux) is as follows:

Folder	/opt/dpmclient/agent/log
File	depinst.log
Contents	Installation log of DPM Client (Linux)
Recording Method	The file has no limit for its file size and is overwritten every time DPM Client (Linux) is installed. The file can be deleted manually.

◆ Image Builder (Remote Console)

The log output in an Image Builder (Remote Console) installed machine is as follows:

Folder	*Image Builder (Remote Console) installation folder*\Datafile\JSLog\ ▪ For x86 OS machines: (Default folder: C:¥Program Files¥NEC¥DeploymentManager\Datafile\JSLog) ▪ For x64 OS machines: (Default folder: C:¥Program Files (x86)¥NEC¥DeploymentManager\Datafile\JSLog)
Files	ImgUserJSLog_*YYYYMMDD*.csv ImgSelfJSLog_*YYYYMMDD*.csv (*YYYYMMDD*: Date)
Contents	Audit log (Operation by a user / internal action in Image Builder)
Recording Method	Each file has no limit for its file size. Current date files cannot be deleted if the DPM services are running, but the past date files can be deleted manually. When 30 days pass after the create date, the files are automatically deleted.

◆ DPM Command Line

The log output in a DPM Command Line installed machine is as follows:

Folder	*DPM Command Line installation folder*\Datafile\Log\ ▪ For x86 OS machines: (Default folder: C:¥Program Files¥NEC¥DeploymentManager\Log) ▪ For x64 OS machines:

	(Default folder: C:¥Program Files (x86)¥NEC¥DeploymentManager\Log)
Files	DPM_Trace1.csv
Contents	Audit log (Operation by a user / internal action in DPM Command Line)
Recording Method	The maximum size of DPM_Trace1.csv is 10 MB. The file is managed up to five generations. (If DPM_Trace1.csv exceeds the maximum size, the file is renamed to "DPM_Trace2.csv." Then, other "DPM_Trace[n].csv" files are also renamed to "DPM_Trace[n+1].csv " and "DPM_Trace5.csv" is deleted.) Files can be deleted manually. (Because files cannot be deleted if the DPM Command Line is running, delete the files manually after DPM Command Line is exexuted.)

2.3.3. Logs of System Monitor - Performance Monitoring Services

The logs System Monitor - Performance Monitoring Services outputs are as follows:

◆ Event Log

Display Name	System Monitor - Performance Monitoring Services
Contents	Error information and operating information of System Monitor - Performance Monitoring Services
Recording Method	The maximum log size is 16,384KB and if the file size reaches the limit, events are overwritten as necessary.

◆ Debug Logs

Folder	*System Monitor - Performance Monitoring Services installation folder*\log\ (Default installation folder: C:\Program Files\NEC\ SystemMonitorPerformance\log)
Files	rm_service.log rm_client.log rm_tool.log rm_command.log
Contents	Error information and trace information of System Monitor - Performance Monitoring Services
Recording Method	The default maximum log size is 10 MB and if a size of a file reaches the limit, an output file is switched. (The size of rm_command.log is fixed to 1 MB.) The file is managed up until the second generation.
Supplement	You can check the log files with Text Editor.

2.3.4. Logs of NEC ESMPRO Manager

There are two types of the log files that NEC ESMPRO Manager outputs; the logs that the main Manager unit outputs and those that AlertManager unit outputs.

Note: If you are using x64 OS, substitute "HKEY_LOCAL_MACHINE\SOFTWARE\Wow6432Node" for "HKEY_LOCAL_MACHINE\SOFTWARE."

◆ Logs that the main Manager unit outputs

- Statistical information files

Folder	The esmpro directory in the directory that the registry [HKEY_LOCAL_MACHINE\SOFTWARE\NEC\NVBASE] WorkDir locates
Files	Files with a name of a server name with .dat or .bak added
Contents	A log of about 40 KB for each collection of output information is outputted if you configure the setting for statistical information automatic collection.
Recording Method	Data amount depends on the configuration of your monitored server. The data is added when collecting information and updated if a period (the default period is 100 days) that you configured on the setting dialog box for statistical information automatic collection.

- Alert logs

Folder	The Alert directory in the directory that the registry [HKEY_LOCAL_MACHINE\SOFTWARE\NEC\NVBASE] WorkDir locates
Files	*.alg (One file for one subject) al.idx (For alert list management / one line for one subject)
Contents	One log file of about 1 KB is outputted for one alert.
Recording Method	If the number of logs exceeds the maximum number of logs on the Option dialog box (*) of AlertViewer, logs are deleted from the oldest one. (*) Web GUI: [Options] on the Header menu. Windows GUI: [Tools] - [Options] menu - General tab
Supplement	If you use the AlertLogAutoSave Settings, files are saved according to the setting.

- Autodiscovery log

Folder	**tmp\AutoDiscovery** directory under the directory that is indicated in the registry: [HKEY_LOCAL_MACHINE\SOFTWARE\NEC\NVBASE] WorkDir
Files	AutodiscoveryXXXXXXXXXXXXXX_YY.DBG ("XXXXXXXXXXXXXX" is the date when an auto discovery process was executed and "YY" is a sequential number.)
Contents	Internal logs of auto discovery process
Use	Failure analysis
Maximum Capacity	50 MB

Action of If a Size Reaches the Maximum Capacity	Outputs a maximum capacity of 5 Mbyte log in one file at one auto discovery process. If the output exceeds the 5 Mbyte, create a new file by adding "YY" of the file name part to output the log. If the number of log files exceeds 10, the oldest log file is overwritten.
Until What Generation the Files Are Managed	Five generation
If Logs Are Increasing in Operation	Increases each time an auto discovery process is executed.
If Capacity Can Be Limited	The log file is not output if the following setting is configured from the Windows GUI: Click Start, click **NEC ESMPRO Manager** and click **NEC ESMPRO Manager** to open the Operation Window. From the Operation Window menu, select [**Tools**] - [**Autodiscover**] - [**Foreground**] - [**TCP/IP Hosts**] to open **AutoDiscover(TCP/IP Hosts)** window. Then, click **Details** to open Details of **AutoDiscover** window. If **Output Datails Log** check box is cleared, the log file is not output any more.
If There Is No Problem If You Delete Files Periodically / If You Delete Them, If You Need to Create Files With the Same Names	No problem / Unnecessary
If You Can Refer to Files (If So, If You Can Check Them Directly)	Yes (Text Editor) However, the architecture is withheld as the logs are the internal logs.

- Status monitoring log

Folder	**tmp\ESMDSVAP** directory under the directory that is indicated in the registry: [HKEY_LOCAL_MACHINE\SOFTWARE\NEC\NVBASE] WorkDir
Files	ESMDSVAPXXXXXXXXXXXXXX.log ESMDSVAPXXXXXXXXXXXXXX.log.gz ("XXXXXXXXXXXXXX" is the date when the file was created.)
Contents	Internal logs of SNMP Monitoring process / Ping Monitoring process
Use	Failure analysis
Maximum Capacity	50 MB
Action of If a Size Reaches the Maximum Capacity	Creates a new log file by updating the "XXXXXXXXXXXXX" part. A log file which reaches 50 MB is compressed to be log.gz (the size is about 1/20) regulary.
Until What Generation the Files Are Managed	21 generation

If Logs Are Increasing in Operation	Increases.
If Capacity Can Be Limited	No
If There Is No Problem If You Delete Files Periodically / If You Delete Them, If You Need to Create Files With the Same Names	No problem / Unnecessary
If You Can Refer to Files (If So, If You Can Check Them Directly)	Yes (Text Editor) However, the architecture is withheld as the logs are the internal logs.

Folder	**tmp\ESMDSVAP** directory under the directory that is indicated in the registry: [HKEY_LOCAL_MACHINE\SOFTWARE\NEC\NVBASE] WorkDir
Files	CompressLogXXXXXXXXXXXXXX.log
Contents	Internal logs of compressing ESMDSVAPXXXXXXXXXXXXXX.log
Use	Failure analysis
Maximum Capacity	500 KB
Action of If a Size Reaches the Maximum Capacity	Creates a new log file by updating the "XXXXXXXXXXXXX" part.
Until What Generation the Files Are Managed	Three generation
If Logs Are Increasing in Operation	Increases each time ESMDSVAPXXXXXXXXXXXXXX.log is compressed.
If Capacity Can Be Limited	No
If There Is No Problem If You Delete Files Periodically / If You Delete Them, If You Need to Create Files With the Same Names	No problem / Unnecessary
If You Can Refer to Files (If So, If You Can Check Them Directly)	Yes (Text Editor) However, the architecture is withheld as the logs are the internal logs.

- Application log

Folder	C:\Program Files\ESMPRO\ESMWEB\wbserver\webapps\esmpro\WEB-INF\service
Files	hislog.txt

Contents	Events of communication with the management server and the operation the operator executes.
Use	Application log
Maximum Capacity	2000 lines (by default)
Action of If a Size Reaches the Maximum Capacity	Renames the file "hislog.bak" to create a new "hislog.txt".
Until What Generation the Files Are Managed	Two generation (hislog.txt、hislog.bak)
If Logs Are Increasing in Operation	Increases up to the maximum capacity.
If Capacity Can Be Limited	Can be changed in the range of 2000 lines to 10000 lines.
If There Is No Problem If You Delete Files Periodically / If You Delete Them, If You Need to Create Files With the Same Names	No problem / Unnecessary If you delete the file, restart the following services: ▪ ESMPRO/SM Common Component ▪ ESMPRO/SM Web Container
If You Can Refer to Files (If So, If You Can Check Them Directly)	Yes (Text Editor) However, the architecture is withheld as the logs are the internal logs.

- System log

Folder	C:\Program Files\ESMPRO\ESMWEB\wbserver\webapps\esmpro\WEB-INF\service
Files	syslog.txt
Contents	Failure analysis for the product developer.
Use	System log
Maximum Capacity	250 KB
Action of If a Size Reaches the Maximum Capacity	Renames the file "syslog.bak" to create a new "syslog.txt".
Until What Generation the Files Are Managed	Two generation (syslog.txt、syslog.bak)
If Logs Are Increasing in Operation	Increases up to the maximum capacity.
If Capacity Can Be Limited	Yes
If There Is No Problem If You Delete Files Periodically / If You Delete Them, If You Need to Create Files With the Same Names	No problem / Unnecessary If you delete the file, restart the following services: ▪ ESMPRO/SM Common Component ▪ ESMPRO/SM Web Container

If You Can Refer to Files (If So, If You Can Check Them Directly)	Yes (Text Editor) However, the architecture is withheld as the logs are the internal logs.

- Console log

Folder	C:\Program Files\ESMPRO\ESMWEB\wbserver\webapps\esmpro\WEB-INF\service
Files	xx.txt xx: Server ID
Contents	Display data of the Remote Console.
Use	Console log
Maximum Capacity	64 KB (by default)
Action of If a Size Reaches the Maximum Capacity	Renames the file xx.bak to create a new xx.txt.
Until What Generation the Files Are Managed	Two generation (xx.txt、xx.bak)
If Logs Are Increasing in Operation	Increases up to the maximum capacity.
If Capacity Can Be Limited	Can be changed in the range of 4 Kbytes - 1000 Kbytes.
If There Is No Problem If You Delete Files Periodically / If You Delete Them, If You Need to Create Files With the Same Names	No problem / Unnecessary
If You Can Refer to Files (If So, If You Can Check Them Directly)	Yes (Text Editor)

- Database log

Folder	C:\Program Files\ESMPRO\ESMWEB\wbserver\webapps\esmpro\WEB-INF\service
Files	rmmanager.log
Contents	Stores execution status of ExpressUpdate internal database.
Use	Failure analysis
Maximum Capacity	3 MB
Action of If a Size Reaches the Maximum Capacity	Deletes the rmmanager.log and creates a new rmmanager.log
Until What Generation the Files Are Managed	One generation (rmmanager.log)
If Logs Are Increasing in Operation	Increases up to the maximum capacity of 3 MB.
If Capacity Can Be Limited	No
If There Is No Problem If You Delete Files Periodically / If You Delete Them, If You Need to Create Files With the Same Names	There is a problem with deleting files. / Unnecessary
If You Can Refer to Files (If So, If You Can Check Them Directly)	Yes (Text Editor)

Folder	C:\Program Files\ESMPRO\ESMWEB\wbserver\webapps\esmpro\WEB-INF\service
Files	derby.log
Contents	Saves startup and execution status of ExpressUpdate internal database.
Use	Failure analysis
Maximum Capacity	None
Action of If a Size Reaches the Maximum Capacity	No action because there is no maximum capacity.
Until What Generation the Files Are Managed	One generation (derby.log)
If Logs Are Increasing in Operation	Increases only if any error occurs. However, the file is cleared each time the service is restarted.

If Capacity Can Be Limited	No
If There Is No Problem If You Delete Files Periodically / If You Delete Them, If You Need to Create Files With the Same Names	There is a problem with deleting files. / Unnecessary
If You Can Refer to Files (If So, If You Can Check Them Directly)	Yes (Text Editor)

- Axis2 log

Folder	C:\Program Files\ESMPRO\ESMWEB\wbserver\webapps\esmpro\WEB-INF\service
Files	axis2.log
Contents	Stores execution status of the common base.
Use	Failure analysis
Maximum Capacity	1 MB
Action of If a Size Reaches the Maximum Capacity	Renames the axis2.log axis2.log.1 or axis2.log.2 and creates a new axis2.log
Until What Generation the Files Are Managed	Three generation (axis2.log, axis2.log.1, axis2.log.2)
If Logs Are Increasing in Operation	Increases up to the maximum capacity of 1 MB.
If Capacity Can Be Limited	No
If There Is No Problem If You Delete Files Periodically / If You Delete Them, If You Need to Create Files With the Same Names	There is a problem with deleting files. / Unnecessary
If You Can Refer to Files (If So, If You Can Check Them Directly)	Yes (Text Editor)

◆ Logs that the AlertManager unit outputs

The following files are the examples that you installed NEC ESMPRO Manager first in the default installation folder in the C drive.

Note: If NEC ESMPRO Agent is installed first, the default installation folder is C:\ESM\AlertMan.

(If NEC ESMPRO Manager is installed first, the default installation folder is C:\ProgramFiles\ESMPRO\AlertMan.)

Folder	C:\ProgramFiles\ESMPRO\AlertMan\Work\
Files	AMVSCKR.log
Contents	Internal logs of TCO/IP alert receiving process
Use	Failure analysis
Maximum Capacity	1000 Kbytes
Action of If a Size Reaches the Maximum Capacity	Renamed to a .bak file and .log is newly created.
Until What Generation the Files Are Managed	Second generation (.log and .bak)
If Logs Are Increasing in Operation	Yes: If AlertManager receives TCP/IP alert, logs increases.
If Capacity Can Be Limited	No
If There Is No Problem If You Delete Files Periodically / If You Delete Them, If You Need to Create Files With the Same Names	No / No: No need for an empty file.
If You Can Refer to Files (If So, If You Can Check Them Directly)	Yes (Text Editor) However, the architecture is withheld as the logs are the internal logs.

Folder	C:\ProgramFiles\ESMPRO\AlertMan\Work\
Files	NVCRTCPY.LOG
Contents	A log of settings of received information An old file is deleted and a new file is created every time alert table is reflected.
Use	Failure analysis
Maximum Capacity	1000 Kbytes
Action of If a Size Reaches the Maximum Capacity	A size does not increase.

Until What Generation the Files Are Managed	One generation
If Logs Are Increasing in Operation	No: The file does not increase.
If Capacity Can Be Limited	No
If There Is No Problem If You Delete Files Periodically / If You Delete Them, If You Need to Create Files With the Same Names	No / No: No need for an empty file.
If You Can Refer to Files (If So, If You Can Check Them Directly)	Yes (Text Editor) However, the architecture is withheld as the logs are the internal logs.

Folder	C:\ProgramFiles\ESMPRO\AlertMan\Work\
Files	NvIRTCp2.log NvIRTCpy.log
Contents	A log of internal process of settings of received information
Use	Failure analysis
Maximum Capacity	1000 Kbytes
Action of If a Size Reaches the Maximum Capacity	Renamed to a .bak file and .log is newly created.
Until What Generation the Files Are Managed	Second generation (.log and .bak)
If Logs Are Increasing in Operation	Yes: If you configure the setting of received information.
If Capacity Can Be Limited	No
If There Is No Problem If You Delete Files Periodically / If You Delete Them, If You Need to Create Files With the Same Names	No / No: No need for an empty file.
If You Can Refer to Files (If So, If You Can Check Them Directly)	Yes (Text Editor) However, the architecture is withheld as the logs are the internal logs.

Folder	C:\ProgramFiles\ESMPRO\NVWORK\AMWORK\SCK\
Files	AMVSCKR.LOG
Contents	Internal logs of TCO/IP alert receiving
Use	Failure analysis
Maximum Capacity	2000 Kbytes
Action of If a Size Reaches the Maximum Capacity	Information is updated from the oldest one
Until What Generation the Files Are Managed	One generation
If Logs Are Increasing in Operation	Yes: If AlertManager receives TCP/IP information.
If Capacity Can Be Limited	No
If There Is No Problem If You Delete Files Periodically / If You Delete Them, If You Need to Create Files With the Same Names	No
If You Can Refer to Files (If So, If You Can Check Them Directly)	No (Binary)

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Appendix A Network Ports and Protocols

Components in SigmaSystemCenter are configured to use the following network ports by default. This appendix provides the information of network ports and protocols.

SystemProvisioning

Item	Execution File Name	Port No.	Protocol	Direction	Connecting Target	Port No.	Execution File Name
DPM Server		Automatic	HTTP	>	DPM Server	80	Web service (IIS)
Alive Monitoring (Ping)	\Program Files\NEC\PVM\bin\PVMServiceProc.exe		ICMP	> <	Managed machine		
Alive Monitoring (Port)	\Program Files\NEC\PVM\bin\PVMServiceProc.exe	Automatic	TCP	>	Managed machine	Any	
Hyper-V Management	\Program Files\WINDOWS\System32\svchost.exe	Automatic	TCP (DCOM)	>	WMI (Hyper-V)	135	
Hyper-V Management	\Program Files\NEC\PVM\bin\PVMServiceProc.exe	Automatic	TCP (DCOM)	>	WMI (Hyper-V)	1024-65535 *2	
UC *1	\Program Files\NEC\PVM\bin\PVMServiceProc.exe	26102	TCP	<	UC Client	Automatic	
UCWebService *1	\Program Files\NEC\PVM\bin\PVMServiceProc.exe	26150	TCP	<	UC Client	Automatic	
Web API *3	\Program Files\NEC\PVM\bin\PVMServiceProc.exe	26105	TCP	<	Web API Client	Automatic	
Web Console		80	TCP	<	A Web browser Virtual machine console	Automatic	
Out-of-Band Management	\Program Files\NEC\PVM\bin\PVMServiceProc.exe	Automatic	UDP (IPMI)	>	BMC	623	

Item	Execution File Name	Port No.	Protocol	Direction	Connecting Target	Port No.	Execution File Name
	\WINDOWS\System32\snmptrap.exe	162	UDP (SNMP Trap) 162	<	BMC	Automatic	

*1 Used by connection from System Monitor - Performance Monitoring Services and SystemProvisioning modules, including the Web Console and pvmutl.

*2 To restrict ports, note the points on Microsoft KB300083 and KB154596.

*3 This is used for the connection from modules co-working with SystemProvisioning . Contact us for more details.

SystemProvisioning (Virtual Machine Console and SOL Console)

Item *1	Execution File Name *2	Port No.	Protocol	Direction	Connecting Target	Port No.	Execution File Name
Virtual Machine Console (Hyper-V)	HyperVConsole.exe	Automatic	TCP	>	Hyper-V Host	2179	
		Automatic	TCP	>	Web Console	80	
Virtual Machine Console (XenServer)	VncConsole.exe	Automatic	TCP	>	XenServer Host	443	
		Automatic	TCP	>	Web Console	80	
Virtual Machine Console (KVM)	VncConsole.exe	Automatic	TCP	>	KVM Host	5900-65535 *3	
		Automatic	TCP	>	Web Console	80	
SOL Console	SOLConsole.exe	Automatic	UDP (IPMI)	>	BMC	623	

*1 A virtual machine console (VMware) connects to 902 port (TCP) of the VMware host. For details, see product manuals of VMware, Inc.

*2 Execution files are saved in the following folders:

- For Windows Server 2008 or later

  \Users\u*ser name*\AppData\Local\Apps\2.0*a randomly selected folder*

- For Windows Server 2003 or before

  \Documents and Settings*user name*\Local Settings\Application Data\Apps\2.0*a randomly selected folder*

*3 If the port number of the virtual display is automatically assigned.

DeploymentManager

- DPM Server *9

Item	Execution File Name *1	Port No.	Protocol	Direction	Connecting Target	Port No.	Execution File Name
Power ON	\Program Files\NEC\DeploymentManager\magicsend.exe	Automatic	UDP	>	Managed machine *3	5561	
Shutdown	\Program Files\NEC\DeploymentManager\apiserv.exe \Program Files\NEC\DeploymentManager\schwatch.exe	Automatic	TCP	>	Managed machine	56010	▪ For a Windows machine \WINDOWS\system32\DepAgent.exe *2 ▪ For a Linux machine /opt/dpmclient/agent/bin/Depagtd
Network boot *4	DHCP server or \Program Files\NEC\DeploymentManager\pxesvc.exe *6	67	UDP(DHCP)	<	Managed machine	68	
	DHCP server or \Program Files\NEC\DeploymentManager\pxesvc.exe *6	67	UDP(DHCP)	>	Managed machine	68	
	\Program Files\NEC\DeploymentManager\pxesvc.exe	4011	UDP	<	Managed machine	68	
	\Program Files\NEC\DeploymentManager\pxesvc.exe	4011	UDP	<	Managed machine	4011	
	\Program Files\NEC\DeploymentManager\pxemtftp.exe	69	UDP (TFTP)	<	Managed machine	*5	
	\Program Files\NEC\DeploymentManager\pxemtftp.exe	69	UDP (TFTP)	>	Managed machine	*5	
	\Program Files\NEC\DeploymentManager\bkressvc.exe	56030	TCP	<	Managed machine	56030	

Item	Execution File Name *1	Port No.	Protocol	Direction	Connecting Target	Port No.	Execution File Name
	\Program Files\NEC\DeploymentManager\bkressvc.exe	56022	TCP	<	Managed machine	56022	
OS installation by disk duplication *7	\Program Files\NEC\DeploymentManager\ftsvc.exe	56023	TCP	<	Managed machine	Automatic	
Backup *8	\Program Files\NEC\DeploymentManager\ftsvc.exe	56023	TCP	<	Managed machine	Automatic	
	\Program Files\NEC\DeploymentManager\bkressvc.exe	56020	TCP	<	Managed machine	56020	
Restore / Multicast *8	\Program Files\NEC\DeploymentManager\ftsvc.exe	56023	TCP	<	Managed machine	Automatic	
	\Program Files\NEC\DeploymentManager\bkressvc.exe	56020	TCP	<	Managed machine	56020	
	\Program Files\NEC\DeploymentManager\bkressvc.exe	56021	UDP	>	Managed machine	56021	
Restore / Unicast *8	\Program Files\NEC\DeploymentManager\ftsvc.exe	56023	TCP	<	Managed machine	Automatic	
	\Program Files\NEC\DeploymentManager\bkressvc.exe	56020	TCP	<	Managed machine	56020	
Installing Service Packs, HorFixes, Linux patch files, and applications by remote update	\Program Files\NEC\DeploymentManager\rupdssvc.exe	Automatic	TCP	>	Managed machine	56000	▪ For a Windows machine \WINDOWS\system32\rupdssvc.exe ※2 ▪ For a Linux machine /opt/dpmclient/agent/bin/Depagtd

Item	Execution File Name *1	Port No.	Protocol	Direction	Connecting Target	Port No.	Execution File Name
	\Program Files\NEC\DeploymentManager\rupdssvc.exe	Automatic	UDP	>	Managed machine	56001	▪ For a Windows machine \WINDOWS\system32\rupdsvc.exe *2 ▪ For a Linux machine /opt/dpmclient/agent/bin/Depagtd
	\Program Files\NEC\DeploymentManager\rupdssvc.exe	56028	TCP	<	Managed machine	Automatic	▪ Only for a Windows machine \WINDOWS\system32\rupdsvc.exe *2
Applying a package by Automatic Update (notification from DPM Server)	\Program Files\NEC\DeploymentManager\rupdssvc.exe	Automatic	TCP	>	Managed machine	56025	\WINDOWS\system32\rupdsvc.exe *2
	\Program Files\NEC\DeploymentManager\rupdssvc.exe	56024	TCP	<	Managed machine	Automatic	\WINDOWS\system32\rupdsvc.exe *2
	\Program Files\NEC\DeploymentManager\rupdssvc.exe	56028	TCP	<	Managed machine	Automatic	\WINDOWS\system32\rupdsvc.exe *2
Applying a package by Automatic Update (request from a managed machine)	\Program Files\NEC\DeploymentManager\rupdssvc.exe	56024	TCP	<	Managed machine	Automatic	\WINDOWS\system32\rupdsvc.exe *2
	\Program Files\NEC\DeploymentManager\rupdssvc.exe	56028	TCP	<	Managed machine	Automatic	\WINDOWS\system32\rupdsvc.exe *2
Acquisition of OS and Hot Fix Information of a managed machine	\Program Files\NEC\DeploymentManager\depssvc.exe	56011	TCP	<	Managed machine	Automatic	▪ For a Windows machine \WINDOWS\system32\ rupdsvc.exe *2 ▪ For a Linux machine /opt/dpmclient/agent/bin/Depagtd
Operation without a DHCP Server	\Program Files\NEC\DeploymentManager\pxesvc.exe	56060	TCP	<	Managed machine	Automatic	
Connection with DPM Web Console	Web service (IIS)	80 *10	HTTP	<	DPM Web Console	Automatic	

Item	Execution File Name *1	Port No.	Protocol	Direction	Connecting Target	Port No.	Execution File Name
Connection with Image Builder (Remote Console)	\Program Files\NEC\DeploymentManager\ftsvc.exe	56023	TCP	<	Image Builder (Remote Console)	Automatic	\Program Files\NEC\DeploymentManager\DIBuilde.exe
Connection with DPM Command Line	Web service (IIS)	80 *10	HTTP	<	DPM Command Line	Automatic	\Program Files\NEC\DeploymentManager\dpmcmd.exe

*1 Paths of execution files in this table are described in the format of installing DPM Server in an x86 OS machine. If DPM Server is installed in an x64 OS machine, substitute "Program Files (x86)" for "Program Files" in the paths.

*2 Paths of execution files in this table are described in the format of installing DPM Client (Windows) in an x86 OS machine. If DPM Client (Windows) is installed in an x64 OS machine, substitute "SysWOW64" for "system32" in the paths.

*3 The address for the machine in the same segment as the machine on which DPM Server is installed is 255.255.255.255. Direct broadcast is used for the machine in the different segments.

E.g.) In the segment of 192.168.0.0 (MASK = 255.255.255.0), the address is 192.168.0.255.

*4 The series of flows are PXE boot (DHCP and tftp).

*5 Depends on the NIC ROM of the attached device.

*6 If a DHCP server is set up on the same machine, the DHCP server uses it. If a DHCP server is set up on a different machine, pxesvc.exe uses it.

*7 The protocols and port numbers described in items of "Restore" are also necessary.

*8 To operate the system with a DHCP server, the protocols and the port numbers described in the items of "Network boot" are also necessary.

To operate the system without a DHCP server, the protocol and the port number described in the items of "Operation without a DHCP Server" are also necessary.

*9 Make this port available because the machines installed DPM Server use the port (TCP: 56050) for the internal process - the connection between DPM Server and Web service (IIS).

*10 You can change the port number to be used by following procedures bellow.

Example) For IIS 7.0

1) Select Start – Administrative Tools - [Internet Information Services (IIS) Manager] .

2) The Internet Information Services (IIS) Manager window appears. Select Computer Name on the tree view, and then right-click Web Sites - Web Site Name. And select Edit Bindings to change the port number.

DPM Server uses the following protocols other than the above table.

- As confirmation of existence, ICMP ECHO (ping) is used from DPM Server to managed machines.
- As restore and multicast, Multicast is used from DPM Server to managed machines.
- As installation of Service Packs, Hot Fixes, Linux patch files, and applications by remote update, Multicast is used from DPM Server to managed machines.

Reference: To use a managed machine as a master machine or a master VM and join it to the domain, the port of domain network must be open. For details, see Subsection 1.1.1, " Notes for Environment Setup When Executing OS Installation by Disk Duplication" and "For General Virtual Environment" in Subsection 1.2.1, "About System Configuration" in *SigmaSystemCenter Notes and Trouble Shooting Reference Guide.*

◆ NFS Server

Item	Execution File Name	Port No.	Protocol	Direction	Connecting Target	Port No.	Execution File Name
OS Clear Installation		111	TCP	<	Managed machine	Automatic	
		111	UDP	<	Managed machine	Automatic	
		1048 *1	TCP	<	Managed machine	Automatic	
		1048 *1	UDP	<	Managed machine	Automatic	
		2049	TCP	<	Managed machine	Automatic	
		2049	UDP	<	Managed machine	Automatic	

*1 This port number may be changed dynamically. If a communication fails, confirm the port number used by the mountd (NFS mount daemon) service using the "rpcinfo -p" command and open the port. If this does not resolve the situation, disable the Windows Firewall settings.

NEC ESMPRO Manager

Item	Execution File Name	Port No.	Protocol	Direction	Connecting Target	Port No.	Execution File Name
Server configuration/ Server Monitoring (SNMP)	\Program Files\NEC\SMM\ESMBASE\bin\nvbase.exe	Automatic	UDP	> <	NEC ESMPRO Agent	161	
Alive Monitoring (Ping)	¥Program Files¥NEC¥SMM¥NVBASE¥bin¥nvbase.exe		ICMP	>	Managed machine		
Manager Report (SNMP)	\Program Files\NEC\SMM\ESMBASE\bin\nvbase.exe *5	162	UDP	<	NEC ESMPRO Agent	Automatic	
Manager Report (TCP/IP In-Band)	\Program Files\NEC\SMM\ESMBASE\bin\amvsckr.exe	31134 *1	TCP	< >	NEC ESMPRO Agent	Automatic	
Remote Wake Up	¥Program Files¥NEC¥SMM¥NVBASE¥bin¥RWUSTART.exe	Automatic	UDP	>	Network card	10101	
Communication between managers	¥Program Files¥NEC¥SMM¥NVBASE¥bin¥nvbase.exe	Automatic	TCP	>	NEC ESMPRO Manager	8806 *2	\Program Files\NEC\SMM\NVBASE\bin\nvbase.exe
	\Program Files\NEC\SMM\ESMBASE\bin\nvbase.exe	8806 *2	TCP	<	NEC ESMPRO Manager	Automatic	¥Program Files¥NEC¥SMM¥NVBASE¥bin¥nvbase.exe
ESM Alert Service	\Program Files\NEC\SMM\NVBASE\bin\esmasvnt.exe	8807* *4	TCP	<	Alert Viewer	Automatic	\Program Files\NEC\SMM\NVBASE\bin\esmaview.exe
SNMP Trap Transmission	¥Program Files¥NEC¥SMM¥NVBASE¥bin¥esmtrprd.exe	Automatic	UDP	>	Third-party SNMP management console	162	
Server configuration / Status monitoring (SNMP)	¥Program Files¥NEC¥SMM¥NVBASE¥bin¥nvbase.exe	Automatic	UDP	>	EM card	161	
Manager Report (SNMP)	\Program Files\NEC\SMM\ESMBASE\bin\nvbase.exe *5	162	UDP	<	EM card	Automatic	

Ack Transmission for Manager Report	¥Program Files¥NEC¥SMM¥NVBASE¥bin¥esmasvnt.exe	Automatic	UDP	>	EM card	5002 *3	

*1 This value can be changed by either of the following procedures:

▪ From Windows GUI, click [Tools] - [Report Settings] on AlertViewer to open Alert Manager, click [Setting] - [Base Setting] - [Receive] tab, then click Configure button.

▪ From Web GUI, click [TCP/IP Report Settings] on the AlertViewer.

*2 The value can be changed only from NEC ESMPRO Manager's Windows GUI.

To change the setting, click [Options] - [Customize] - [My Manager] on the Operation Window of Windows GUI.

In addition, if Inter-Manager Communication is being used, the Neighbor Manager setting must be changed. (Inter-Manager Communication is the function only implemented by Windows GUI.)

To change the setting, click [Options] - [Customize] - [Remote Manager].

*3 You can change the port number from the setting on the EM card.

*4 You can change the port number from [Tools] - [Port Settings] of AlertViewer.

Adding a Firewall exception is unnecessary.

*5 If the **Use SNMP Trap Service** is set for the SNMP trap reception setting, use "%windir%\system32\snmptrap.exe."

The SNMP trap reception setting can be checked by either of the following procedures:

▪ From Web GUI, click Alert Receive Setting and check the [SNMP Trap Setting] on the AlertViewer.

▪ From Windows GUI, click [Options] - [Customize] - [My Manager].

System Monitor - Performance Monitoring Services

- Monitored machines

Item	Execution File Name	Port No.	Protocol	Direction	Connecting Target	Port No.	Execution File Name
Performance Data Collection (Windows)		137	UDP	>	Monitored machine	137	(system)
	(system)	137	UDP	<	Monitored machine	137	
		Automatic	TCP	>	Monitored machine	139	(system)
		Automatic	TCP	>	Monitored machine	445	(system)
Performance Data Collection (Linux / KVM) *1		Automatic	TCP	>	Monitored machine	23	
Performance Data Collection (Linux / KVM) *2		Automatic	TCP	>	Monitored machine	22	
Performance Data Collection (ESX / ESXi, Xen)		Automatic	TCP	>	Monitored machine	443	

*1 Used when collecting performance data through the Telnet.

*2 Used when collecting performance data through the SSH.

- Management Console machine

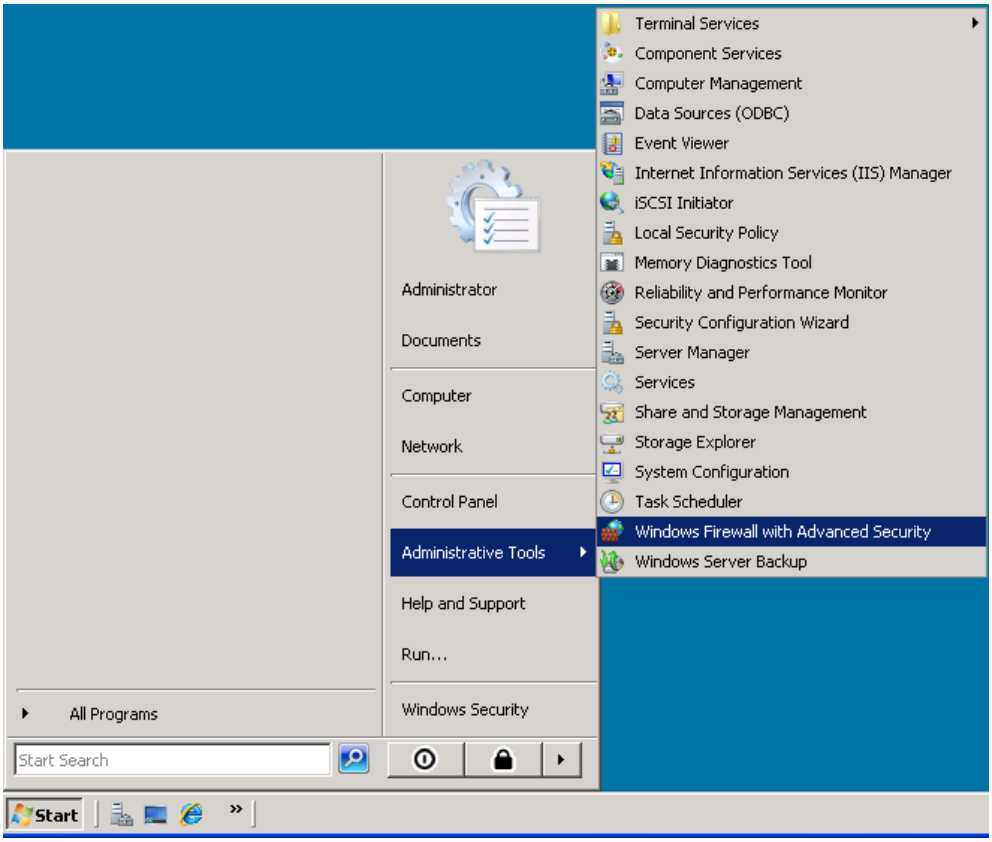
Item	Execution File Name	Port No.	Protocol	Direction	Connecting Target	Port No.	Execution File Name
Connection between a Management server and a Management Console machine		Automatic	TCP	>	Management Console machine	26202	\Program Files\NEC\SystemMonitorPerformance\bin\RM_PFMCONSOLE.exe
	\Program Files\NEC\SystemMonitorPerformance\bin\rm_pfmservice.exe	26200	TCP	<	Management Console machine	Automatic	

Adding ICMP Echo Reply to the Exception List of Windows Server 2008 Firewall

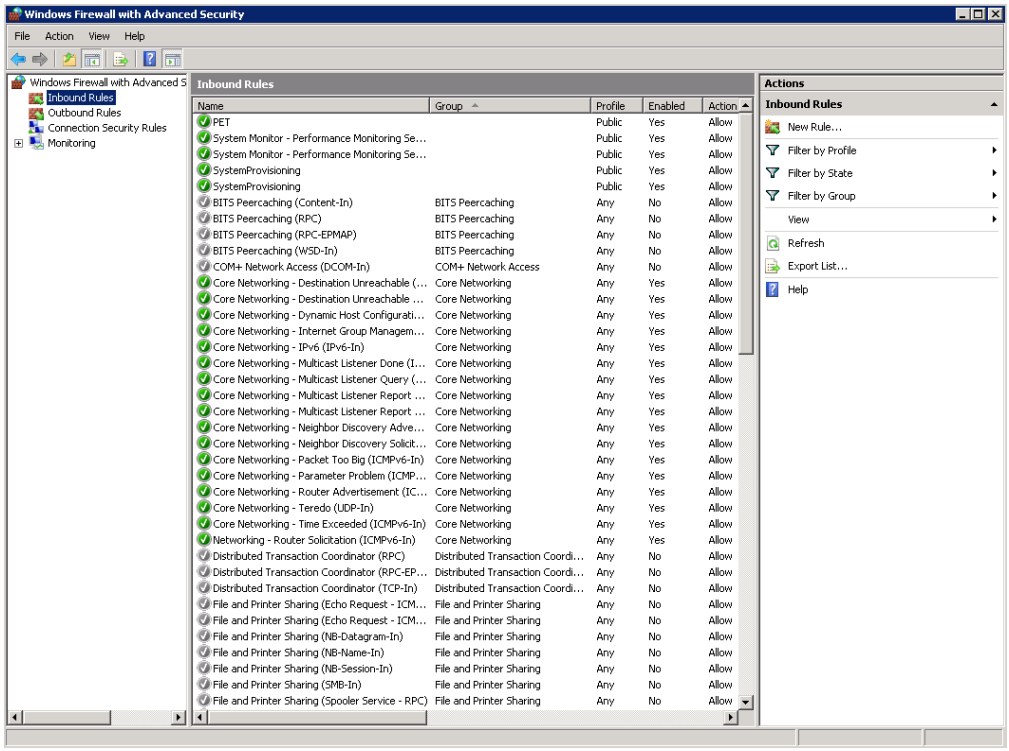
Windows Server 2008 does not receive ICMP Echo Reply by default. Windows Server 2008 Firewall blocks the connection.

To use Ping monitoring of alive monitoring function on Windows Server 2008, perform the following procedure to add ICMP Echo Reply to the Firewall exception list.

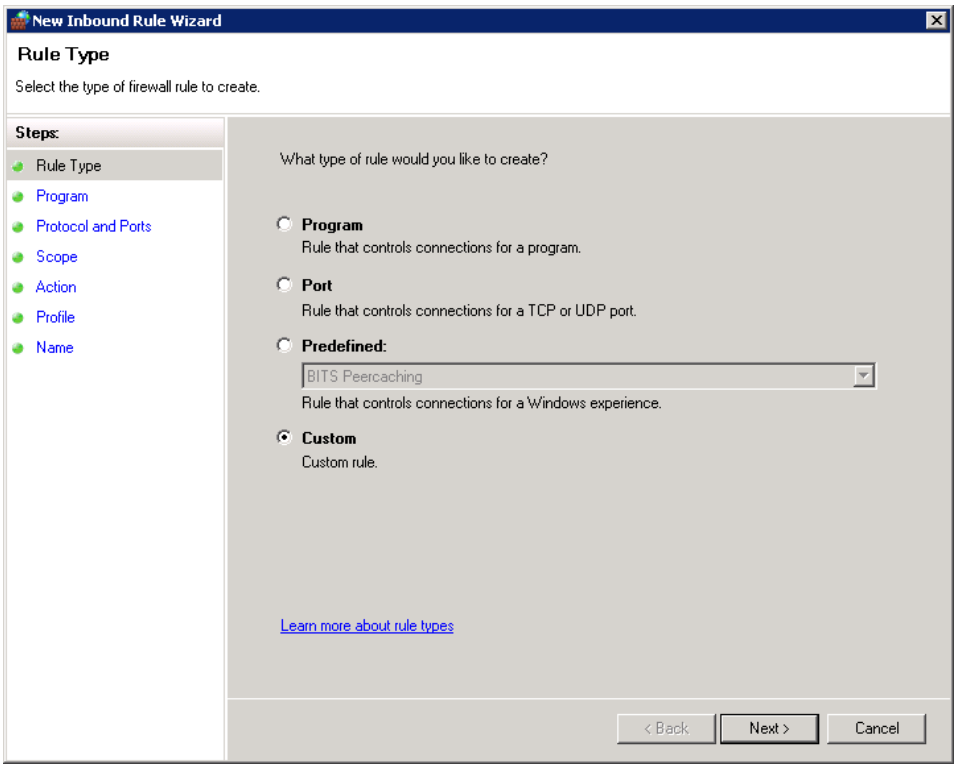
1. Click **Start**, and click **Administrative Tools** to open **Windows Firewall with Advanced Security**.



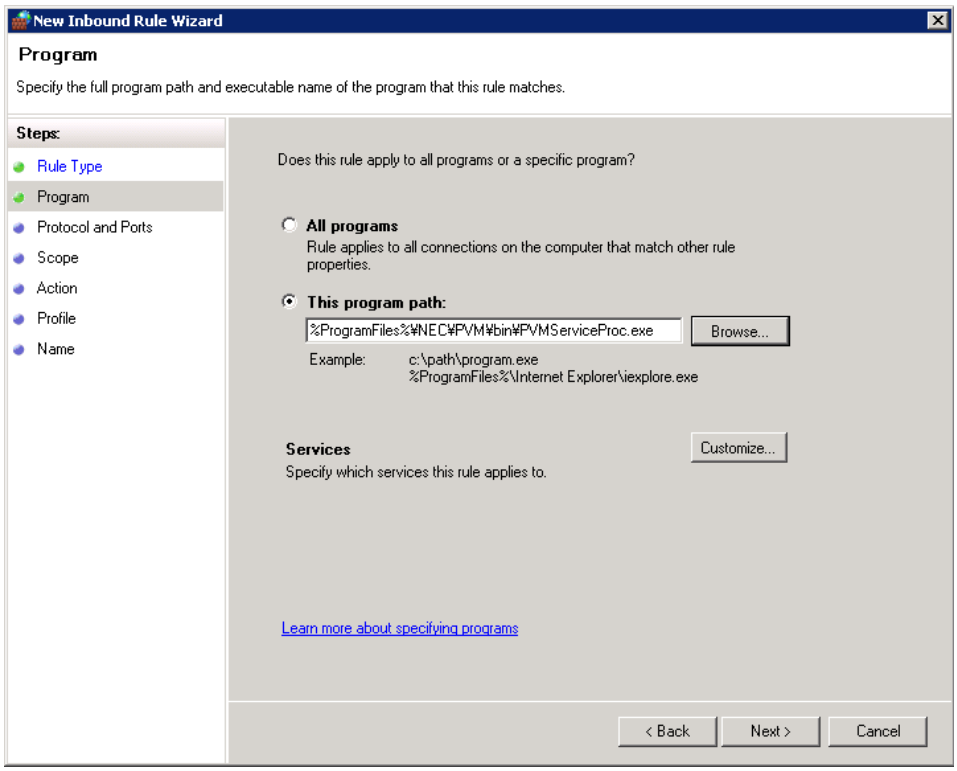
2. Select **Inbound Rules** in the left pane, click **New Rule…** in the right pain.


Windows Firewall with Advanced Security
File Action View Help
Windows Firewall with Advanced S
Inbound Rules
Outbound Rules
Connection Security Rules
Monitoring
Inbound Rules
Name Group Profile Enabled Action
PET Public Yes Allow
System Monitor - Performance Monitoring Se... Public Yes Allow
System Monitor - Performance Monitoring Se... Public Yes Allow
SystemProvisioning Public Yes Allow
SystemProvisioning Public Yes Allow
BITS Peercaching (Content-In) BITS Peercaching Any No Allow
BITS Peercaching (RPC) BITS Peercaching Any No Allow
BITS Peercaching (RPC-EPMAP) BITS Peercaching Any No Allow
BITS Peercaching (WSD-In) BITS Peercaching Any No Allow
COM+ Network Access (DCOM-In) COM+ Network Access Any No Allow
Core Networking - Destination Unreachable (... Core Networking Any Yes Allow
Core Networking - Destination Unreachable ... Core Networking Any Yes Allow
Core Networking - Dynamic Host Configurati... Core Networking Any Yes Allow
Core Networking - Internet Group Managem... Core Networking Any Yes Allow
Core Networking - IPv6 (IPv6-In) Core Networking Any Yes Allow
Core Networking - Multicast Listener Done (I... Core Networking Any Yes Allow
Core Networking - Multicast Listener Query (... Core Networking Any Yes Allow
Core Networking - Multicast Listener Report ... Core Networking Any Yes Allow
Core Networking - Multicast Listener Report ... Core Networking Any Yes Allow
Core Networking - Neighbor Discovery Adve... Core Networking Any Yes Allow
Core Networking - Neighbor Discovery Solicit... Core Networking Any Yes Allow
Core Networking - Packet Too Big (ICMPv6-In) Core Networking Any Yes Allow
Core Networking - Parameter Problem (ICMP... Core Networking Any Yes Allow
Core Networking - Router Advertisement (IC... Core Networking Any Yes Allow
Core Networking - Teredo (UDP-In) Core Networking Any Yes Allow
Core Networking - Time Exceeded (ICMPv6-In) Core Networking Any Yes Allow
Networking - Router Solicitation (ICMPv6-In) Core Networking Any Yes Allow
Distributed Transaction Coordinator (RPC) Distributed Transaction Coordi... Any No Allow
Distributed Transaction Coordinator (RPC-EP... Distributed Transaction Coordi... Any No Allow
Distributed Transaction Coordinator (TCP-In) Distributed Transaction Coordi... Any No Allow
File and Printer Sharing (Echo Request - ICM... File and Printer Sharing Any No Allow
File and Printer Sharing (Echo Request - ICM... File and Printer Sharing Any No Allow
File and Printer Sharing (NB-Datagram-In) File and Printer Sharing Any No Allow
File and Printer Sharing (NB-Name-In) File and Printer Sharing Any No Allow
File and Printer Sharing (NB-Session-In) File and Printer Sharing Any No Allow
File and Printer Sharing (SMB-In) File and Printer Sharing Any No Allow
File and Printer Sharing (Spooler Service - RPC) File and Printer Sharing Any No Allow
Actions
Inbound Rules
New Rule...
Filter by Profile
Filter by State
Filter by Group
View
Refresh
Export List...
Help

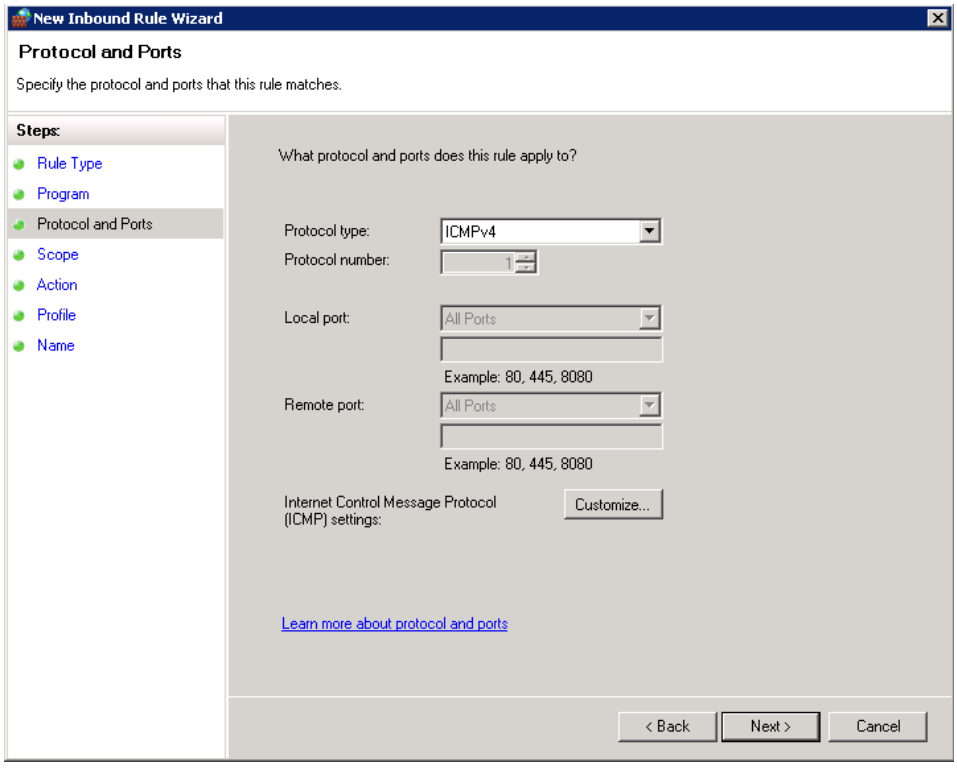
3. Select **Custom**, and click **Next**.



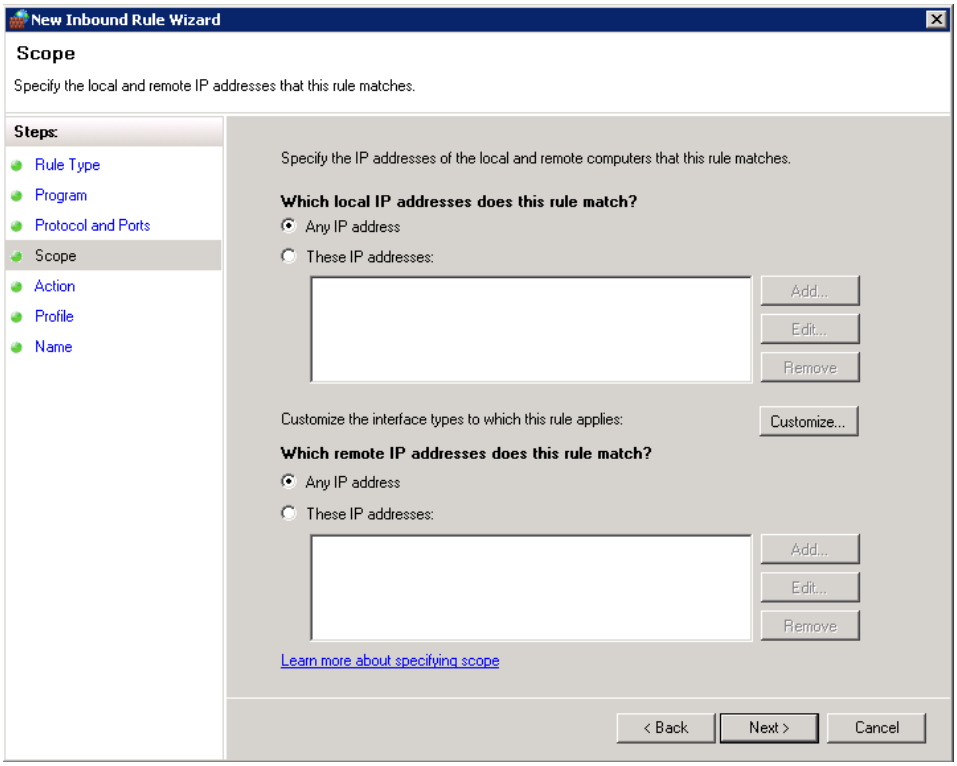
4. Enter **%ProgramFiles%\NEC\PVM\bin\PVMServiceProc.exe**, and click **Next**.



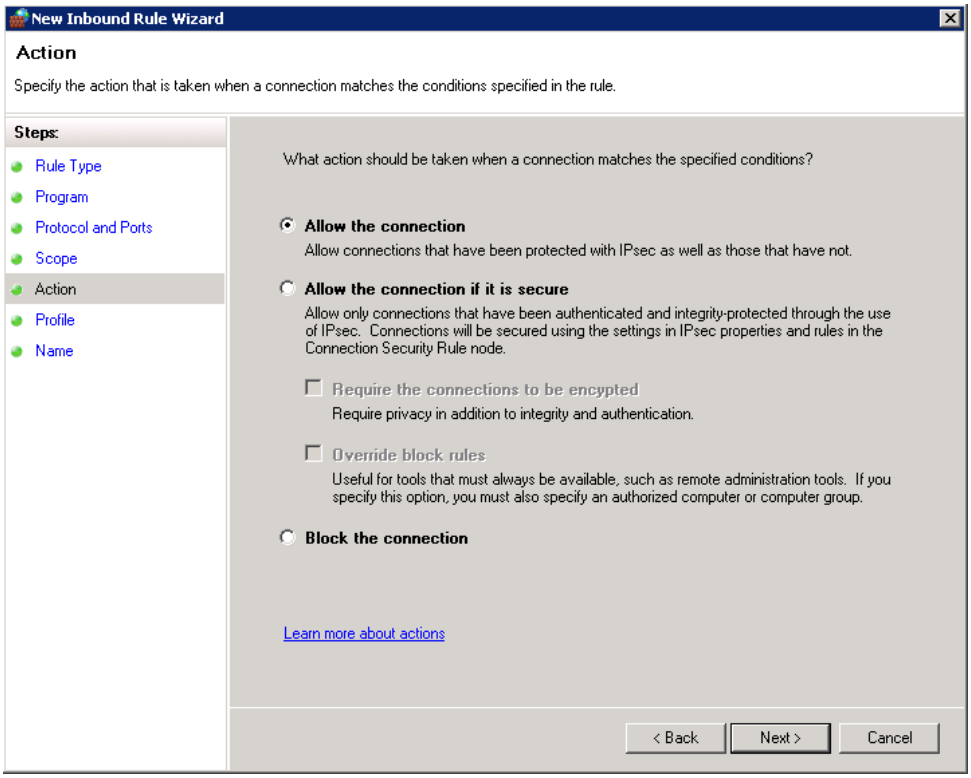
5. Select **ICMPv4** in **Protocol type**, and click **Next**.



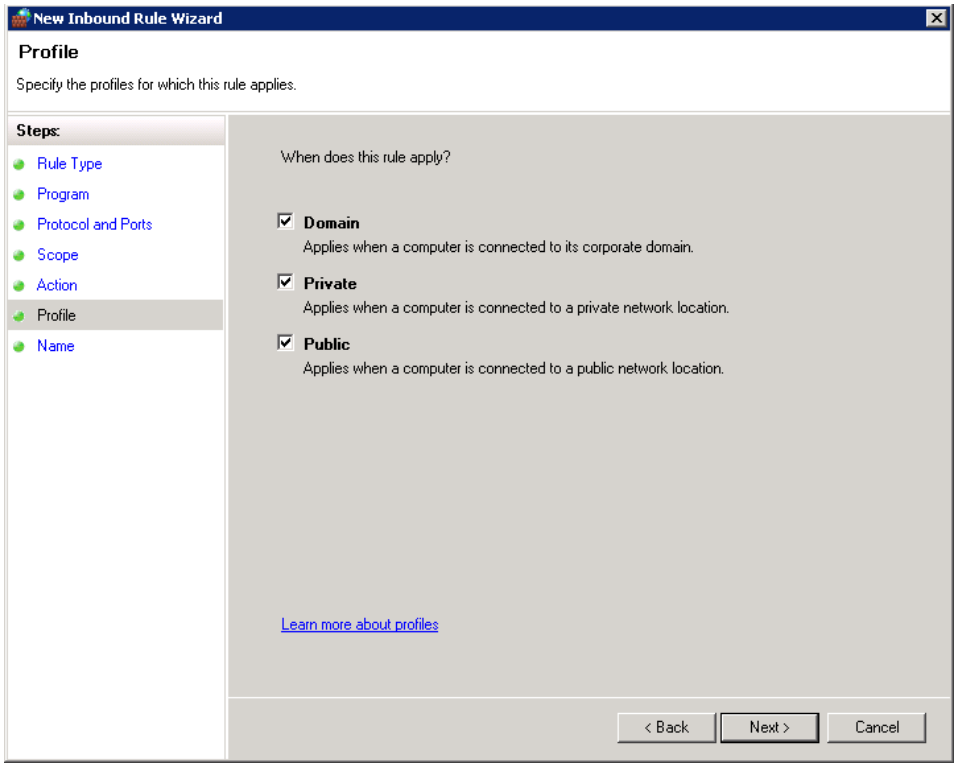
6. Click **Next**.



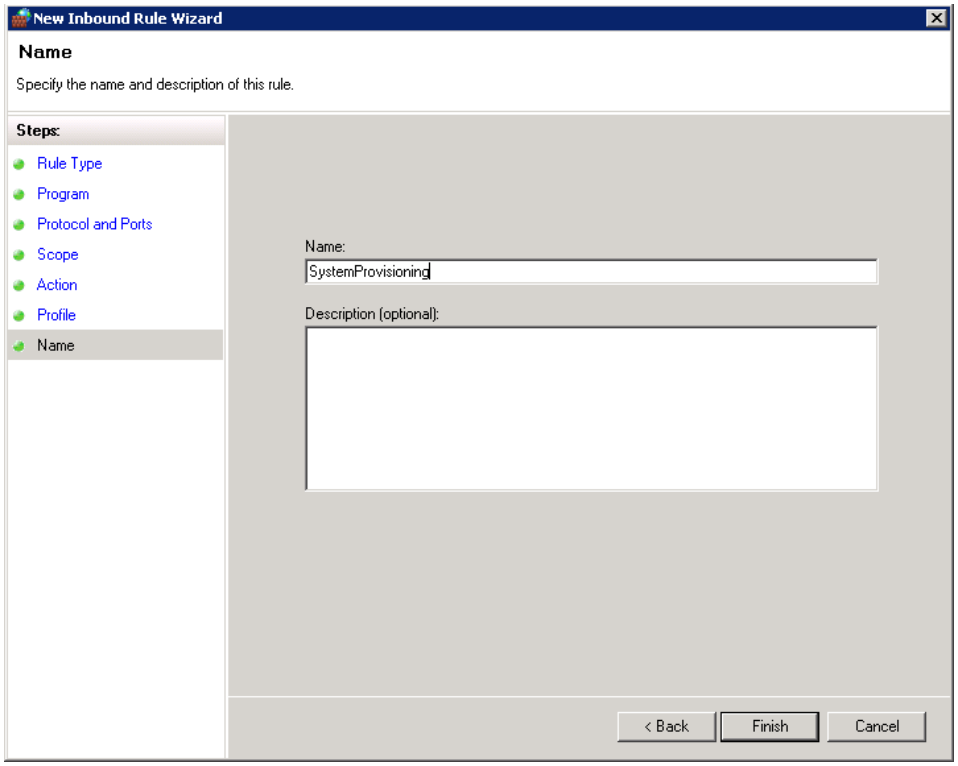
7. Click **Next**.


New Inbound Rule Wizard
Action
Specify the action that is taken when a connection matches the conditions specified in the rule.
Steps:
Rule Type
Program
Protocol and Ports
Scope
Action
Profile
Name
What action should be taken when a connection matches the specified conditions?
Allow the connection
Allow connections that have been protected with IPsec as well as those that have not.
Allow the connection if it is secure
Allow only connections that have been authenticated and integrity-protected through the use of IPsec. Connections will be secured using the settings in IPsec properties and rules in the Connection Security Rule node.
Require the connections to be encypted
Require privacy in addition to integrity and authentication.
Override block rules
Useful for tools that must always be available, such as remote administration tools. If you specify this option, you must also specify an authorized computer or computer group.
Block the connection
Learn more about actions
< Back
Next >
Cancel

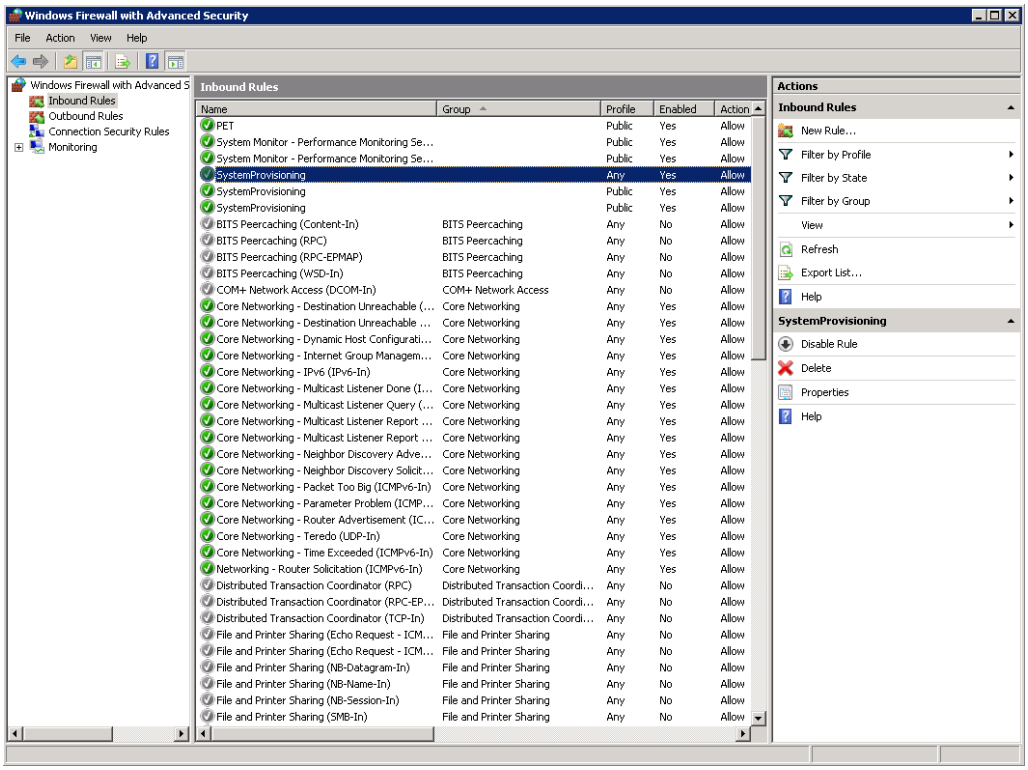
8. Click **Next**.



9. Enter an arbitrary name in the **Name** box, and click **Finish**.



10. Confirm that the setting is added to the **Inbound Rules**.


Windows Firewall with Advanced Security
File Action View Help
Windows Firewall with Advanced S
Inbound Rules
Outbound Rules
Connection Security Rules
Monitoring
Inbound Rules
Name Group Profile Enabled Action
PET Public Yes Allow
System Monitor - Performance Monitoring Se... Public Yes Allow
System Monitor - Performance Monitoring Se... Public Yes Allow
SystemProvisioning Any Yes Allow
SystemProvisioning Public Yes Allow
SystemProvisioning Public Yes Allow
BITS Peercaching (Content-In) BITS Peercaching Any No Allow
BITS Peercaching (RPC) BITS Peercaching Any No Allow
BITS Peercaching (RPC-EPMAP) BITS Peercaching Any No Allow
BITS Peercaching (WSD-In) BITS Peercaching Any No Allow
COM+ Network Access (DCOM-In) COM+ Network Access Any No Allow
Core Networking - Destination Unreachable (... Core Networking Any Yes Allow
Core Networking - Destination Unreachable ... Core Networking Any Yes Allow
Core Networking - Dynamic Host Configurati... Core Networking Any Yes Allow
Core Networking - Internet Group Managem... Core Networking Any Yes Allow
Core Networking - IPv6 (IPv6-In) Core Networking Any Yes Allow
Core Networking - Multicast Listener Done (I... Core Networking Any Yes Allow
Core Networking - Multicast Listener Query (... Core Networking Any Yes Allow
Core Networking - Multicast Listener Report ... Core Networking Any Yes Allow
Core Networking - Multicast Listener Report ... Core Networking Any Yes Allow
Core Networking - Neighbor Discovery Adve... Core Networking Any Yes Allow
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Core Networking - Packet Too Big (ICMPv6-In) Core Networking Any Yes Allow
Core Networking - Parameter Problem (ICMP... Core Networking Any Yes Allow
Core Networking - Router Advertisement (IC... Core Networking Any Yes Allow
Core Networking - Teredo (UDP-In) Core Networking Any Yes Allow
Core Networking - Time Exceeded (ICMPv6-In) Core Networking Any Yes Allow
Networking - Router Solicitation (ICMPv6-In) Core Networking Any Yes Allow
Distributed Transaction Coordinator (RPC) Distributed Transaction Coordi... Any No Allow
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File and Printer Sharing (Echo Request - ICM... File and Printer Sharing Any No Allow
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File and Printer Sharing (NB-Datagram-In) File and Printer Sharing Any No Allow
File and Printer Sharing (NB-Name-In) File and Printer Sharing Any No Allow
File and Printer Sharing (NB-Session-In) File and Printer Sharing Any No Allow
File and Printer Sharing (SMB-In) File and Printer Sharing Any No Allow
Actions
Inbound Rules
New Rule...
Filter by Profile
Filter by State
Filter by Group
View
Refresh
Export List...
Help
SystemProvisioning
Disable Rule
Delete
Properties
Help

Appendix B Transferring the Configuration Database

Although the configuration database is created on a management server when SystemProvisioning is installed, SQL Server 2008 R2 configured on a remote server on the network also can be used. The following case is an example of creating SQL Server 2008 R2 Express Instance (Instance name: SSCCMDB) on a server that is not a management server with the name, "SERVER1", and using the SQL instance as the configuration database, which is described according to different authentication modes.

Transferring the configuration database from the management server to another server, however, decreases performance of SystemProvisioning because SystemProvisioning must frequently access to the remote configuration database.

Therefore, this procedure (transferring the configuration database) is not recommended.

Note: You cannot setup the database of System Monitor - Performance Monitoring Services on a server which is not a management server.

Using Windows Authentication Login

Perform the following procedures to transfer the configuration database when using the Windows authentication login.

Note: Windows Authentication Login is valid only if SERVER1 joins the domain. If SERVER1 joins the workgroup, use SQL Authentication Login.

---

1. **Backing up SystemProvisioning**

   Back up SystemProvisioning.

   For the procedure, see Subsection 10.2.1, "Backing up SystemProvisioning" in *SigmaSystemCenter Configuration Guide*.

   Note: Set the name of the backup file as "backup.dat".

   ---

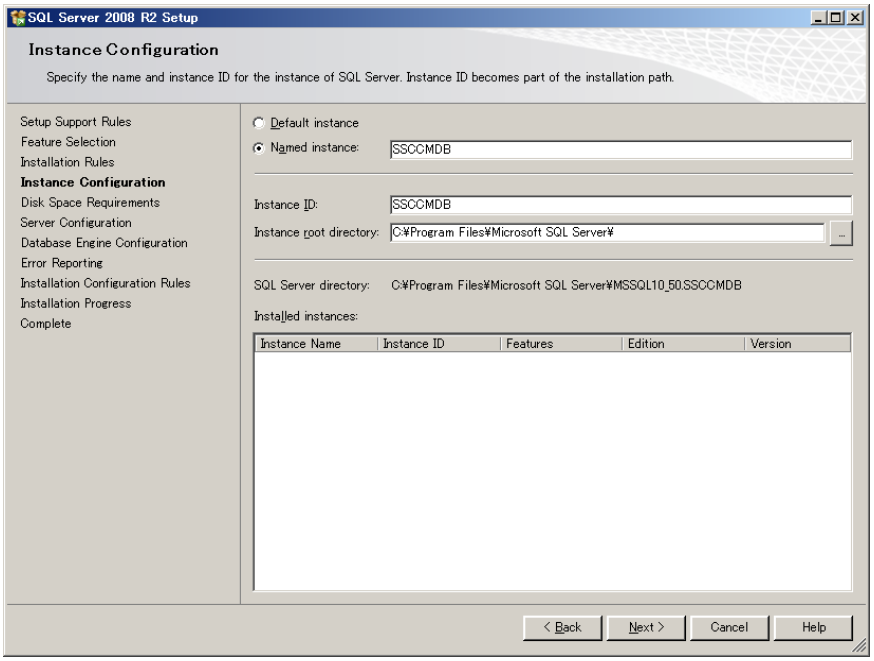
2. **Creating Instance**

   Setup the SQL Server 2008 R2 Express on the SERVER1.

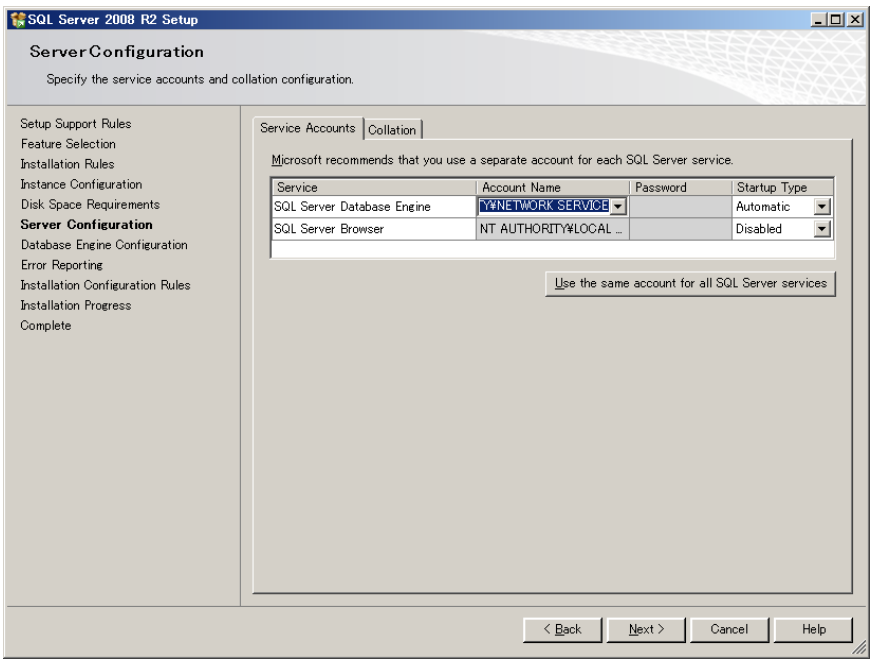
   1. Download the setup program of SQL Server 2008 R2 Express from the following site.

      http://www.microsoft.com/download/en/details.aspx?id=26729

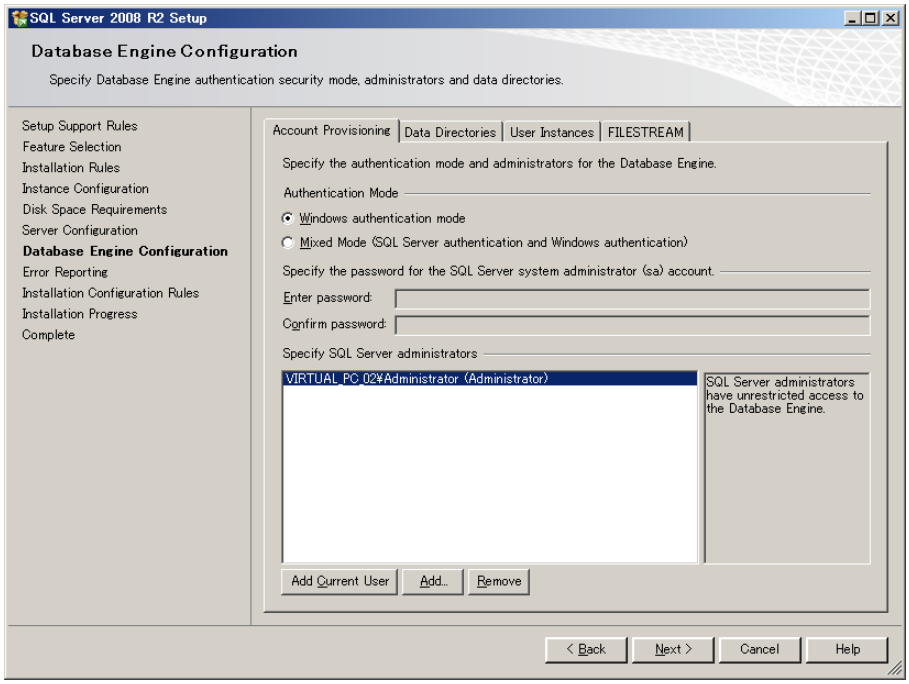
2. Run the downloaded SQLEXPR.EXE and proceed with the setup according to the instructions on the screen.
3. The **Instance Configuration** dialog box appears. Select **Named instance**, and enter **SSCCMDB** in the text box.



4. **Server Configuration** dialog box appears. Select **NT AUTHORITY\NETWORK SERVICE** for the account name of SQL Server Database Engine service.



5. **Database Engine Configuration** dialog box appears. Select **Windows authentication mode**.



After this, follow the instructions that appear on the screen to complete the setup.

3. Validating the network connection

Because SQL Server 2008 R2 Express permits only the local client connection by default, you need to enable the network connection.

In addition, SQL Server Browser must be started and Firewall exceptions must be created.

Reference: Refer to the following site for more details.

http://support.microsoft.com/kb/914277/en-us

---

4. Creating a database

Run the following command on a command prompt window. Always use **pvminf** as the database name used as the configuration database.

E.g.1)

```
> sqlcmd -E -S (local)\SSCCMDB -Q "create database pvminf"
```

E.g.2)

```
> sqlcmd -E -S (local)\SSCCMDB
1> create database pvminf
2> go
```

5. Restarting the service

Click the **Start** menu, and click **Control Panel**. From **Control Panel**, double-click **Administrative Tools**. From **Administrative Tools**, and double-click **Services** to start the Services Snap-in on the SERVER1.

Right-click the following service and click **Restart**.

Displayed Name: **SQL Server (SSCCMDB)**

Service Name: **MSSQL$SSCCMDB**

6. Transferring the database to the SERVER1

Restore the file backed up in the procedure 1.

Put the backup file on the local disk of SERVER1 in advance. In the following example, the name of the backup file is set as **C:\temp\backup.dat**.

E.g.1)

```
> sqlcmd  -E -S (local)\SSCCMDB -Q "restore database
pvminf from disk = 'C:\temp\backup.dat' with replace"
```

E.g.2)

```
> sqlcmd -E -S (local)\SSCCMDB
1> restore database pvminf from disk =
‘C:\temp\backup.dat’ with replace
2> go
```

7. Creating SQL Server login

Run the following command on a command prompt window of SERVER1. Always use **pvminf** as the database name used as the configuration database.

```
> sqlcmd –E –S (local)\SSCCMDB
1> CREATE LOGIN [Login Name] FROM WINDOWS WITH
DEFAULT_DATABASE=[pvminf]
2> go
1> EXEC master..sp_addsrvrolemember @loginame = N'Login
Name', @rolename = N'sysadmin'
2> go
1> exit
```

Note: Replace the following data with the *Login Name* part:
*Domain Name**the computer name of the management server*$.

E.g.) An input example for the case of domain

Domain name: Domain

The computer name of the management server: SSC_Management_Server

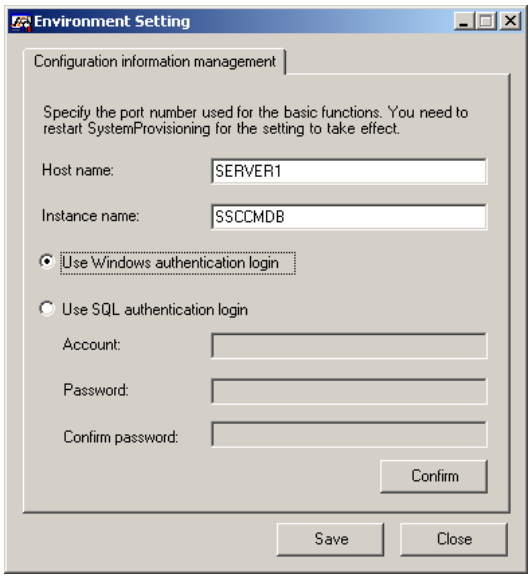
```
> sqlcmd –E –S (local)\SSCCMDB
1> CREATE LOGIN [Domain\SSC_Management_Server$] FROM
WINDOWS WITH DEFAULT_DATABASE=[pvminf]
2> go
1> EXEC master..sp_addsrvrolemember @loginame =
N'Domain\SSC_Management_Server$', @rolename =
N'sysadmin'
2> go
1> exit
```

8. Environment settings

Configure the environment settings and restart the PVMService.

1. Start *SystemProvisioning Installation Folder*\bin\PvmConfig.exe on the management server.

2. The **Environment Setting** dialog box appears.



3. Enter values in the **Host name** and **Instance name** boxes, and select **Use Windows authentication login**. Click **Save**.
4. Click the **Start** menu, and click **Control Panel**. From **Control Panel**, double-click **Administrative Tools**. From **Administrative Tools**, and double-click **Services** to start the Services Snap-in.
5. Right-click **PVMService** and click **Restart**.

Transferring the configuration database using Windows authentication login is now complete.

Using SQL Authentication Login

Perform the following procedures to transfer the configuration database using the SQL authentication login.

1. Backing up SystemProvisioning

Back up SystemProvisioning.

For the procedure, see Subsection 10.2.1, "Backing up SystemProvisioning" in *SigmaSystemCenter Configuration Guide*.

Note: Set the name of the backup file as "backup.dat".

---

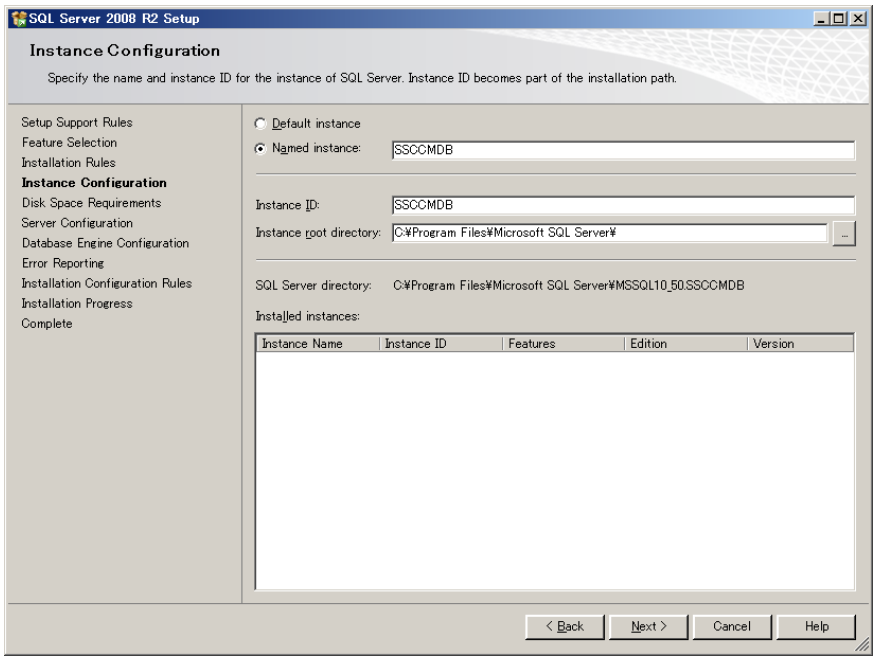
2. Creating Instance

Setup the SQL Server 2008 R2 Express on the SERVER1.

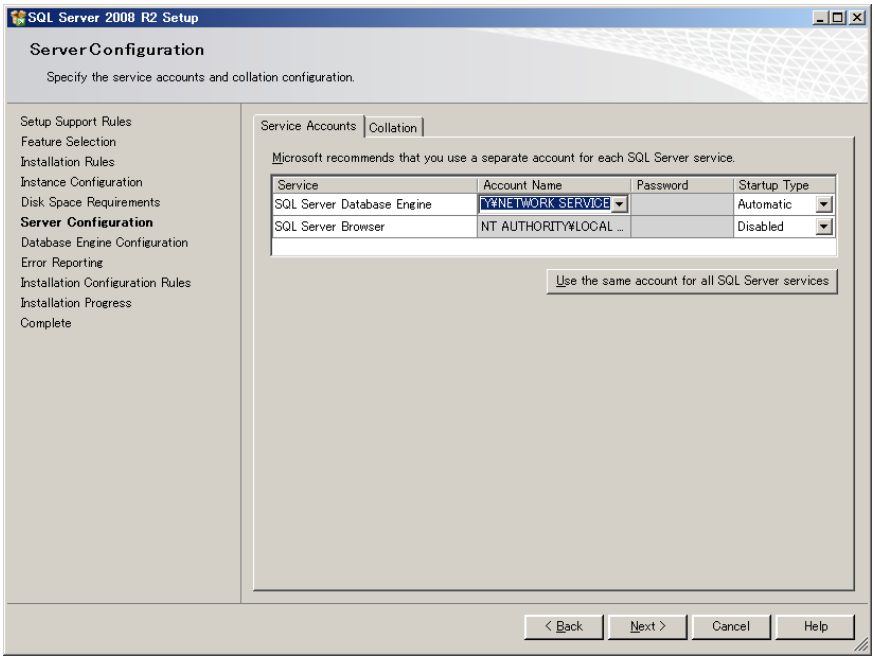
1. Download the setup program of SQL Server 2008 R2 Express from the following site.

   http://www.microsoft.com/download/en/details.aspx?id=26729

2. Run the downloaded SQLEXPR.EXE and proceed with the setup according to the instructions on the screen.
3. The **Instance Configuration** dialog box appears. Select **Named instance**, and enter **SSCCMDB** in the text box.

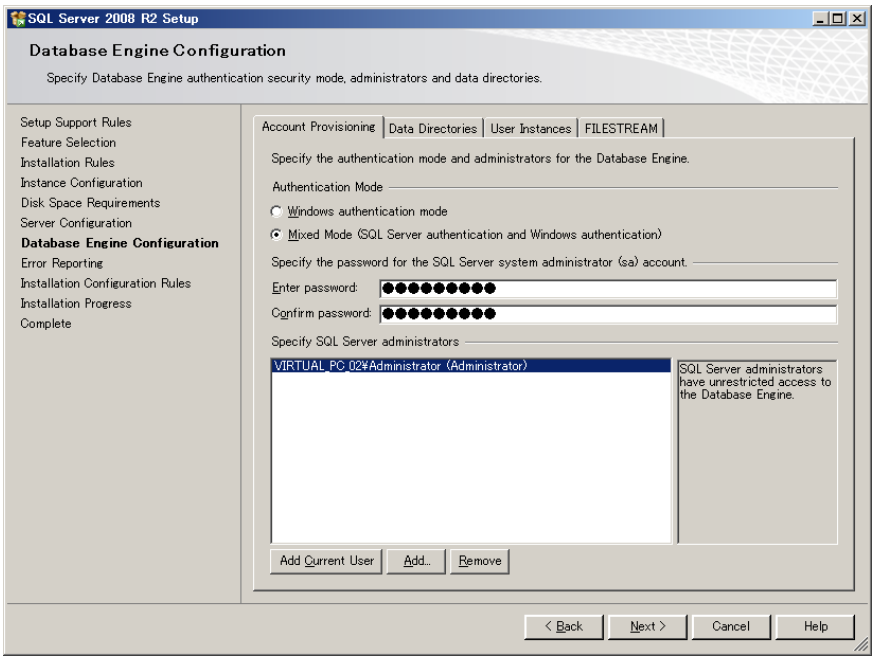


4. **Server Configuration** dialog box appears. Select **NT AUTHORITY\NETWORK SERVICE** for the account name of SQL Server Database Engine service.



5. **Database Engine Configuration** dialog box appears. Select **Mixed Mode (SQL Server authentication and Windows authentication)**. Enter the sa logon password in the **Enter password** box and the **Confirm password** box.

Note: The administrator determines the password.



After this, follow the instructions that appear on the screen to complete the setup.

3. **Validating the network connection**

   As SQL Server 2008 R2 Express permits only the local client connection by default, you need to enable the network connection.

   In addition, SQL Server Browser must be started and Firewall exceptions must be created.

Reference: Refer to the following site for more details.

http://support.microsoft.com/kb/914277/en-us

---

4. **Creating a database**

   Run the following command on the Command Prompt window. Always use **pvminf** as the database name used as the configuration database.

   E.g.1)

```
> sqlcmd -E -S (local)\SSCCMDB -Q "create database pvminf"
```

   E.g.2)

```
> sqlcmd -E -S (local)\SSCCMDB
1> create database pvminf
2> go
```

5. **Restarting the service**

   Click the **Start** menu, and click **Control Panel**. From **Control Panel**, double-click **Administrative Tools**. From **Administrative Tools**, and double-click **Services** to start the Services Snap-in on the SERVER1.

   Right-click the following service and click **Restart**.

   Displayed Name: **SQL Server (SSCCMDB)**

   Service Name: **MSSQL$SSCCMDB**

6. **Transferring the database to the SERVER1**

   Restore the file backed up in the procedure 1.

   Put the backup file on the local disk on the SERVER1 in advance. In the following example, the name of the backup file is set as **C:\temp\backup.dat**.

   E.g.1)

```
> sqlcmd -E -S (local)\SSCCMDB -Q "restore database pvminf
from disk = 'C:\temp\backup.dat' with replace"
```

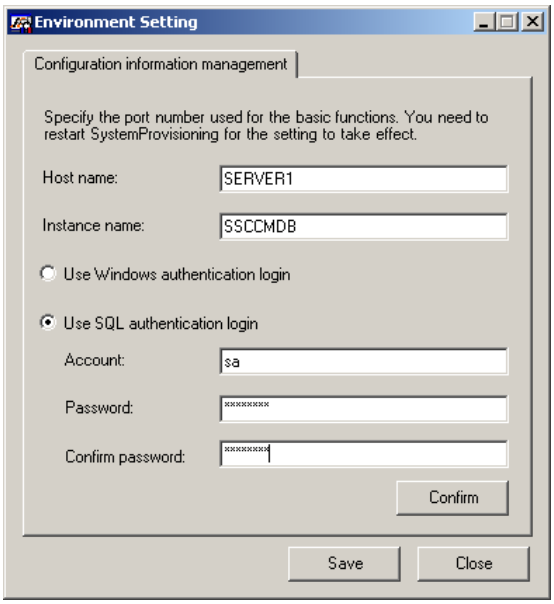
E.g.2)

```
> sqlcmd -E -S (local)\SSCCMDB
1> restore database pvminf from disk =
'C:\temp\backup.dat' with replace
2> go
```

7. Environment settings

Configure the environment settings and restart the PVMService.

1. Start *SystemProvisioning Installation Folder*\bin\PvmConfig.exe on the management server.
2. The **Environment Setting** dialog box appears.



3. Enter values in the **Host name** and **Instance name** boxes, and select **Use SQL authentication login**. Enter sa in the **Account** box, and enter the sa password entered in Procedure 2 in the **Password** and **Confirm password** boxes. And then, click **Save**.
4. Click the **Start** menu, and click **Control Panel**. From **Control Panel**, double-click **Administrative Tools**. From **Administrative Tools**, and double-click **Services** to start the Services Snap-in.
5. Right-click **PVMService** and click **Restart**.

Transferring the configuration database using SQL authentication login is now complete.

Appendix C How to Estimate Database Usage

SystemProvisioning, System Monitor - Performance Monitoring Services and DeploymentManager use the database in SigmaSystemCenter.

Instructions on how to estimate the database usage are provided below.

SystemProvisioning

Estimates of disk capacities are described below according to the machine types.

- Physical machines

  About 4.1 KB is used for management of a blade chassis and a blade server.

  Use the following information as a guide of individual calculation.

Blade Chassis	0.8 KB / unit
Blade Server	3.3 KB / unit

E.g.1) When using blade servers

When building 20 blade chassis containing 5 blade servers in each, necessary disk capacity is calculated to about 346 KB according to the following formula.

Necessary disk capacity 346 KB = 20 (the number of blade chassis) * 0.8 KB + 100 (the number of blade servers) * 3.3 KB

About 4.1 KB is used for management of a single server.

E.g.2) When using single servers

When building 5 single servers, necessary disk capacity is calculated to about 20.5 KB according to the following formula.

Necessary disk capacity 20.5 KB = 5 (the number of blade servers) * 4.1 KB.

However, if the numbers of NIC and memories to connect to the machine increase, necessary disk capacity also increases.

- Virtual machines

  vCenter Server or ESX must be built to manage virtual machines.

  About 9.0 KB is used for management of a virtual machine.

  Use the following information as a guide of individual calculation.

vCenter Server	0.5 KB / unit
DataCenter	0.6 KB / unit
ESX	4.0 KB / unit
virtual machine	3.3 KB / unit
template	0.6 KB / unit

E.g.1)

When building vCenter Server * 1, DataCenter * 5, ESX * 50, a virtual machine * 1500, and a template* 300, necessary disk capacity is calculated to about 5.4 MB according to the following formula.

Necessary disk capacity 5333.5 KB = 1 (the number of vCenter Server) * 0.5 KB +5 (the number of DataCenter) * 0.6 KB + 50 (the number of ESX) * 4.0 KB +1500 (the number of virtual machines) * 3.3 KB +300 (the number of templates) * 0.6 KB.

If the numbers of NIC and memories to connect to the machine increase, necessary disk capacity also increases.

- Logical settings

  Logical settings include server groups, host definitions and IP address definitions.

  Use the following information as a guide of individual calculation.

Server Group	1.5 KB / unit
Host Definition	0.7 KB / unit
IP address	0.4 KB / unit

E.g.1)

When creating a server group with 10 host definitions that are configured 1 IP address for each, necessary disk capacity is calculated to about 12.5 KB.

E.g.2)

When creating 50 server groups with 500 host definitions of DHCP operations for each, necessary disk capacity is calculated to about 17.5 MB.

- Operations log

  Operations logs are recorded in the SystemProvisioning database.

  An operations log is composed of two kinds of information: logs and events which are the source of the logs.

  Usually, multiple logs are registered for one event.

  Events can be recorded up to one third of the maximum amount of log records.

  Use the following information as a guide of capacity calculation.

  - 0.6 KB is used for one record of operations log.
  - 2.8 / 3 KB is used for one event.

The size of operations log (KB) = The number of operations log records * (0.6 + 2.8 / 3) KB

  E.g.)

  When recording 100,000 records of operations log, necessary disk capacity is about 153 MB. (100,000 is the maximum number of operations logs which can be recorded.)

The size of operations log (about 153 MB) = 100,000 * (0.6 + 2.8 / 3) KB = 60,000 + 93,333 KB

System Monitor - Performance Monitoring Services

System Monitor - Performance Monitoring Services collects performance data and accumulates them in the database. Depending on operation forms, the database might exceed the maximum capacity of SQL Server. For example, the maximum capacity of SQL Server 2008 R2 Express is 10 GB.

There are two ways to avoid the above case:

1. Upgrade SQL Server 2008 R2 Express to SQL Server 2008.
2. Control the amount of performance data which are stored in the database from the System Monitor - Performance Monitoring Services setting.

System Monitor - Performance Monitoring Services classifies performance data into database tables according to periods of the performance data.

Under the following conditions, an estimate can be made as the table below.

- 1 machine to be monitored
- 1 items of performance information
- Data collection period is 1 minute
- Data storage period is the default value

1 minutes collection data : 3 (days) * 60 KB = 180 KB 5 minutes collection data : 7 (days) * 30 KB = 210 KB 15 minutes collection data : 30 (days) * 7 KB = 210 KB 1 hour collection data : 3* 30 (days) *2 KB= 180 KB 1 day collection data : 5 * 365 (days) * 0.1 KB = 182.5 KB The size of total amount = (180 + 210 + 210 + 180 + 182.5) KB = 962.5 KB ≒ 1 MB

* Performance data that exceeds the data retention period will be deleted regularly.

Necessary database capacity for the performance data can be configured by adjusting the number of monitoring performance information items, data storage period, and data collection period.

DeploymentManager

SQL Server 2008 R2 SP1 Express requires about 711 MB disk spaces.

DPM Server installation requires 256 MB databace spaces.

A rough estimate of database capacity necessary for future increases can be made according to the following formula.

Necessary disk capacity = The number of registered computers * 10 KB + The number of registered packages * 3 KB + The number of registered computers * 0.15 KB * The number of registered packages

E.g.)

When the number of registered computers is 40,000 and the number of registered packages is 100, necessary disk capacity is about 1.0 GB.

Appendix D Types of Action Sequence

The following table shows action sequences.

NO.	Action Sequence Names Corresponding machine configuration change	Functions	Physical Machine	Virtual Machine
1	ChangeServerGroup Change Machine Usage (Physical Machine)	Changes a machine running in the specified group to another usage (move to another group).	A	N
2	CreateMachineToGroup Activating Machine / Create and Assign Machine (Virtual Machine)	Creates a virtual machine and activates the virtual machine in the specified group.	N	A
3	DeleteManagedVirtualMachine	Deletes an entity of the virtual machine standing by as a management target.	N	A
4	DeleteVirtualMachine Delete VM	Makes a virtual machine running in the group stand by in the shared pool and deletes an entity of the virtual machine.	N	A
5	DistributeSoftwareToMachine	Distributes software to a machine running in the group.	A	A
6	DistributeSoftwareToMachinesInGroup	Distributes software to all machines running in the group.	A	A
7	DistributeSoftwareToMachinesInGroupWithScenario	Distributes the specified software to all machines running in the group.	A	A
8	DistributeSoftwareToMachineWithScenario	Distributes the specified software to a machine.	A	A
9	FailoverVMServer	Moves the virtual machine(s) on the virtual machine server that generated an error to a different virtual machine server in the group.	N	A
10	LoadBalanceVMServer	Moves the virtual machine(s) on the virtual machine server with a high load to a different virtual machine server in the group and alleviates the high load.	N	A
11	MoveFromGroupToPool Deleting Machine / Release Resource (Physical Machine) Deleting Machine / Scale In (Physical Machine) Deleting Machine / Release Resource (Virtual Machine) Deleting Machine / Scale In (Virtual Machine)	Deletes and shuts down a machine running in the group and makes the machine stand by in a group pool. A virtual machine server whose settings for a virtual machine and storage are not enabled is not shut down. The deleted machine is removed from the monitoring target of NEC ESMPRO Manager (*1).	A	A
12	MoveFromManagedToPool	Shuts down and adds a machine in the shared pool to the pool of the group. A virtual machine server whose settings for a virtual machine and storage are not enabled is not shut down.	A	A

NO.	Action Sequence Names Corresponding machine configuration change	Functions	Physical Machine	Virtual Machine
13	MoveFromPoolToGroup Activating Machine / Allocate Machine (Physical Machine) Activating Machine / Scale Out (Physical Machine) Activating Machine / Allocate Machine (Virtual Machine) Activating Machine / Scale Out (Virtual Machine)	Activates a machine in the pool of the group to run in the group. Distributes software, customizes the machine (*2), and registers to NEC ESMPRO Manager monitoring target (*1). If automatic registration to DPM is configured, the machine is registered to DPM (*3).	A	A
14	MoveFromPoolToManaged	Deletes a machine standing by from the pool of the group and makes the machine stand by in the shared pool.	A	A
15	MoveMachine Move Virtual Machine (Virtual Machine)	Moves a virtual machine to the other virtual machine server.	N	A
16	MoveMasterMachineToGroup Activating Machine / Register Master Machine (Physical Machine) Activating Machine / Register Master Machine (Virtual Machine)	Activates a machine standing by in the shared pool and group pool as a master machine. Distribution software is not distributed. In addition, register to NEC ESMPRO Manager monitoring target (*1). If automatic registration to DPM is configured, the machine is registered to DPM (*3).	A	A
17	RebootMachine Power Operation to Machine / Restart	Reboots a machine.	A	A
18	ShutdownMachine Power Operation to Machine / Shutdown	Shuts down a running machine.	A	A
19	StartupMachine Power Operation to Machine / Start	Starts a stopped machine.	A	A
20	SuspendMachine Power Operation to Machine / Suspend	Suspends an active machine.	A	A
21	TakeOverMachine Replace Machine (Physical Machine)	Replaces a machine running in the group with a pool machine. The new machine succeeds the information used by the old machine. The replaced machine is always made to stand by in a group pool.)	A	N
22	PowerOnMachine Power Operation to machine / Power ON	Powers on a stopped machine.	A *4	N
23	PowerOffMachine Power Operation to machine / Power OFF	Powers off a running machine.	A *4	N
24	ResetMachine Power Operation to machine / Reset	Resets a running machine at hardware level.	A *4	N

NO.	Action Sequence Names Corresponding machine configuration change	Functions	Physical Machine	Virtual Machine
25	PowerCycleMachine Power Operation to machine / Power Cycle	Powers off and then Power on a running machine.	A *4	N
26	AcpiShutdownMachine Power Operation to machine / ACPI Shutdown	Executes ACPI shutdown on a running machine.	A *4,5	N
27	DumpMachine Dump Machine	Sends dump demand to a machine.	A *4,5	N
28	LedTurnOnMachine	Sends LED on demand to a running machine.	A *4	N
29	LedTurnOffMachine	Sends LED off demand to a running machine.	A *4	N
30	ApplyOptimizedPlacementRule	Applies the Optimized Placement Rule.	N	A
31	CreateImage	Creates an image.	N	A
32	CreateTemplate	Creates a template.	N	A
33	InvestigateAndPowerOff	Diagnoses a machine.	A	A
34	InvestigateMachineAndSetFaulted	Diagnoses the specified type machine.	A	A
35	InvestigateMachineAndSetReady	Executes total recover diagnosis and sets ready status.	A	A
36	ModifyRunningMachine	Modifies a running machine.	A	A
37	PowerSaveVMserver	Executes power save of a VM server.	A	N
38	PredictiveShutdownVMServer	Stops a VM server (Predictive).	A	N
39	PredictiveStartupVMServer	Starts up a spare VM server.	A	N
40	ReconstructVirtualMachine	Reconstructs a virtual machine.	N	A
41	ScaleIn	Executes ScaleIn.	A	A
42	ScaleOut	Executes ScaleOut.	A	A
43	ShutdownAtScaleIn	Shuts down a machine according to the group setting.	A	A
44	StartupAtScaleOut	Starts up a machine according to the group setting.	A	A
45	SuspendAtScaleIn	Suspends a machine according to the group setting.	N	A

*1 This operation is executed only when the target is a physical machine.

*2 If the target is a virtual machine, customizing the machine is executed. If the target is a physical machine, it depends on the type of distribution software.

*3 This operation is executed only when the target is a virtual machine.

*4 Out-of-Band Management must be enabled.

*5 OS on a target machine must be configured appropriately.

A: action sequence applicable
N: action sequence not applicable

Appendix E Revision History

- Second Edition (January 2012) Revised adding descriptions about enhancements in Update 1.

  Added description regarding the vSphere 5.0 supports.

  Chapter 1 1.2.5. Events the VMware (vCenter Server) Compatible Function Can Detect
  1.2.6. Events the VMware (ESXi) Compatible Function Can Detect

  Added description regarding the newly featured resource pool monitoring

  Chapter 1 1.2. Events SigmaSystemCenter Can Detect
  1.2.7. Events the Optimized Placement Can Detect
  1.6.4. Settings of a Standard Policy (VM Server), Standard Policy (VM Server Predictive), Standard Policy (VM Server Power save)
  1.6.5. Standard Policy (VM Server ESXi)
  1.6.6. Settings of a Standard Policy (VM Server Hyper-V), a Standard Policy (VM Server Hyper-V Predictive), And a Standard Policy (VM Server Hyper-V Power Save)

  Chapter 2 2.3.1. Logs of SystemProvisioning

  Added or modified description regarding the enablement of SMTP Authentication

  Chapter 1 1.7.1. Notification/ E-mail, Event Log

- First Edition (September 2011): New

Appendix F License Information

This product includes certain open source software.
Details of individual licenses are provided on the *SigmaSystemCenter DVD*

<*SigmaSystemCenter Installation DVD*>\doc\OSS directory.

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